

Indiana Department of Transportation

County Harrison

Route SR-11

Des. No. 1600485

FHWA-Indiana Environmental Document CATEGORICAL EXCLUSION / ENVIRONMENTAL ASSESSMENT FORM GENERAL PROJECT INFORMATION

Road No./County:

State Road (SR) 11, Harrison County

Designation Number:

1600485

Project Description/Termini:

Bridge Replacement Project/SR 11 over South Fork Buck Creek, 0.85 mile south of SR 211 at Reference Point 19.42.

After completing this form, I conclude that this project qualifies for the following type of Categorical Exclusion (FHWA must review/approve if Level 4 CE):

X	Categorical Exclusion, Level 2 – The proposed action meets the criteria for Categorical Exclusion Manual Level 2 - table 1, CE Level Thresholds. Required Signatories: ESM (Environmental Scoping Manager)
	Categorical Exclusion, Level 3 – The proposed action meets the criteria for Categorical Exclusion Manual Level 3 - table 1, CE Level Thresholds. Required Signatories: ESM, ES (Environmental Services Division)
	Categorical Exclusion, Level 4 – The proposed action meets the criteria for Categorical Exclusion Manual Level 4 - table 1, CE Level Thresholds. Required Signatories: ESM, ES, FHWA
	Environmental Assessment (EA) – EAs require a separate FONSI. Additional research and documentation is necessary to determine the effects on the environment. Required Signatories: ES, FHWA

Note: For documents prepared by or for Environmental Services Division, it is not necessary for the ESM of the district in which the project is located to release for public involvement or sign for approval.

Approval

ESM Signature

Date

ES Signature

Date

FHWA Signature

Date

Release for Public Involvement

ESM Initials

Date

ES Initials

Date

Certification of Public Involvement

Office of Public Involvement

Date

Note: Do not approve until after Section 106 public involvement and all other environmental requirements have been satisfied.

INDOT ES/District Env.

Reviewer Signature: _____

Date: _____

Name and Organization of CE/EA Preparer: _____

Harlan Ford, GAI Consultants, Inc.

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Part I - PUBLIC INVOLVEMENT

Every Federal action requires some level of public involvement, providing for early and continuous opportunities throughout the project development process. **The level of public involvement should be commensurate with the proposed action.**

	Yes	No
Does the project have a historic bridge processed under the Historic Bridges PA*?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
If No, then:		
Opportunity for a Public Hearing Required?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

*A public hearing is required for all historic bridges processed under the Historic Bridges Programmatic Agreement between INDOT, FHWA, SHPO, and the ACHP.

Discuss what public involvement activities (legal notices, letters to affected property owners and residents (i.e. notice of entry), meetings, special purpose meetings, newspaper articles, etc.) have occurred for this project.

Remarks: Notice of Entry letters were mailed to potentially affected property owners near the project area on August 25, 2017 notifying them about the project and that individuals responsible for land surveying and field activities may be seen in the area. A sample copy of the Notice of Entry letter is included in Appendix C, page C4 to C5.

The project will meet the minimum requirements described in the current Indiana Department of Transportation (INDOT) Public Involvement Manual which requires the project sponsor to offer the public an opportunity to submit comment and/or request a public hearing. Therefore, a legal notice will appear in a local publication contingent upon the release of this document for public involvement. This document will be revised after the public involvement requirements are fulfilled.

Public Controversy on Environmental Grounds

Will the project involve substantial controversy concerning community and/or natural resource impacts? ☐ Yes ☒ No

Remarks: At this time, there is no substantial public controversy concerning impacts to the community or to natural resources.

Part II - General Project Identification, Description, and Design Information

Sponsor of the Project: Indiana Department of Transportation (INDOT) INDOT District: Seymour
Local Name of the Facility: SR-11

Funding Source (mark all that apply): Federal ☒ State ☒ Local ☐ Other* ☐

*If other is selected, please identify the funding source: _____

PURPOSE AND NEED:

Describe the transportation problem that the project will address. The solution to the traffic problem should NOT be discussed in this section. (Refer to the CE Manual, Section IV.B.2. Purpose and Need)

The need for this project stems from the deteriorating condition of the existing structure (Bridge No. 011-311-06119). An INDOT Bridge Inspection Report dated July 3, 2018 documented cracking and delamination on the underside of the bridge deck and cracking in the wearing surface. The superstructure exhibited longitudinal cracking with efflorescence and delamination on Beams 1 and 2. Beam 2 also has spalling with exposed rebar at the south end of the beam. Beam 3 has minor cracking and efflorescence. In addition, the footings of the substructure are exposed at both abutments and there is minor cracking in the breast walls. Scour is also present at the structure with the top of the footings exposed. The Bridge Inspection Report gave the bridge a condition rating of "5". Condition ratings range from "0" to "9" with "0" being a failed structure and "9" being a structure in excellent condition.

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The purpose of this project is to provide a structurally and hydraulically sufficient structure that will ensure continued passage for motorists over South Fork Buck Creek. This project should result in the structure having an overall condition rating of "9", indicating excellent condition as noted above.

PROJECT DESCRIPTION (PREFERRED ALTERNATIVE):

County: Harrison Municipality: Elizabeth

Limits of Proposed Work: SR-11, approximately 212 ft. northeast of bridge to 219 ft. southwest of bridge

Total Work Length: 0.121 Mile(s) Total Work Area: 0.50 Acre(s)

Is an Interchange Modification Study / Interchange Justification Study (IMS/IJS) required?
If yes, when did the FHWA grant a conditional approval for this project?

Yes ¹	No
<input type="checkbox"/>	<input checked="" type="checkbox"/>
Date: <input type="text"/>	

¹If an IMS or IJS is required; a copy of the approved CE/EA document must be submitted to the FHWA with a request for final approval of the IMS/IJS.

In the remarks box below, describe existing conditions, provide in detail the scope of work for the project, including the preferred alternative. Include a discussion of logical termini. Discuss any major issues for the project and how the project will improve safety or roadway deficiencies if these are issues.

Project Location

The proposed project is located on SR-11, approximately 0.85 mile south of SR-211 in Posey Township. Specifically, this project is located in Section 33 of Township 4 South, Range 5 East, in Harrison County, Indiana as shown on the Lanesville U.S. Geological Society (USGS) 7.5 Minute Topographic Map (Appendix B, page B2).

Existing Conditions

SR-11 is a north-south, rural major collector, consisting of two 10ft. travel lanes with accompanying 4ft. shoulders (1ft. paved) within the project area. SR-11 had an average annual daily traffic (AADT) count of 3,165 vehicles per day (VPD) in 2016 (source: INDOT Roadway Inventory & Functional Class Viewer). The existing structure is a single span, concrete channel beam bridge, approximately 24 ft. in length, that was built in 1966 and is exhibiting signs of deterioration. This bridge carries SR-11 over South Fork Buck Creek. There are driveways present within 300 ft. of the bridge at both the north and south approaches. The surrounding land use is primarily rural residential and agricultural fields with sparse trees surrounding the project area.

Preferred Alternative

INDOT and the Federal Highway Administration (FHWA) are proposing to replace the existing structure. The project area is localized to the immediate area surrounding the bridge and will extend approximately 212 ft. to the northeast and 219 ft. to the southwest from the center of the structure. The scope of work includes the following:

- Replace the existing structure with a new channel beam structure
- Replace the approach slabs, bridge railing, railing transitions and guardrail
- Place riprap along the spill slopes and bridge cone
- Raise the vertical alignment of the roadway by 2.5 in. to maintain compatibility with the adjacent roadway sections and to preserve the integrity of the creek channel.
- Install riprap turnouts at all 4 corners of the bridge
- Increase lane width to 11 ft.

Please refer to Appendix B, pages B8 to B15 for plan sheets that illustrates the above stated work.

Every effort will be made to avoid, minimize and/or mitigate project impacts during the bridge replacement project. This project demonstrates independent utility as it is a stand-alone project that is not dependent on any other planned projects.

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Due to the scope of work, disruptions to traffic may be necessary as the project will involve a road closure with a detour using state routes. Please refer to the *Maintenance of Traffic (MOT)* section of this document for more details.

Based on the above noted information, the preferred alternative will meet the purpose and need of the project by replacing the existing structure.

OTHER ALTERNATIVES CONSIDERED:

Describe all discarded alternatives, including the Do-Nothing Alternative and an explanation of why each discarded alternative was not selected.

The "No Build" Alternative

The "No Build" alternative was considered for the proposed project. This alternative proposed utilization of the existing roadway with no expenditure of capital funds or improvement. However, the "No Build" alternative would not address the purpose of the project, which is to provide a structurally and hydraulically sufficient structure that will ensure continued passage for motorists over South Fork Buck Creek. For the stated reasons, this alternative was eliminated from further consideration.

Precast Three-Sided Flat-Top Structure (Alternative 1)

Alternative 1 would consist of replacing the existing structure with a 36 ft. span by 9 ft. rise, precast three-sided flat top structure with wingwalls, approximately 70 ft. in length. The scope of work for this alternative includes:

- Install a new continuous nested guardrail across the new three-sided structure.
- Roadway pavement would be carried over the structure
- Place riprap along the channel banks
- Construct retaining walls
- Raise the vertical alignment approximately 6 ft. in order to provide an adequate hydraulic opening and to accommodate the structure depth

This alternative would have greater environmental impacts and greater cost than the preferred alternative. Greater environmental impacts would stem primarily from the significant amount of earthwork required to construct a 70' long precast three-sided flat top structure and additional impacts to South Fork Buck Creek. In addition, this project would result in approximately \$175,000 in additional cost when compared to the preferred alternative. The additional cost stems from the added cost of a larger structure, earthwork, construction of retaining walls, additional right-of-way, and raising the vertical alignment of the roadway by 6 ft. Although this alternative meets the purpose and need of the project, it was ultimately dismissed for a more feasible and prudent alternative.

Single-span Spill-Through Prestressed Wide-Flange Bulb-T Bridge (Alternative 2)

Alternative 3 would consist of replacing the existing structure with a single span, 36 in. deep prestressed concrete wide-flange bulb-tee beam spill through bridge approximately 63 ft. in length. The scope of work for this alternative includes:

- Install end bents on pile foundations to support the superstructure
- Construct new approach slabs, bridge railing, railing transitions, and guardrail
- Place riprap along the spill slopes and bridge cone
- Raise the vertical alignment approximately 6 ft. in order to provide an adequate hydraulic opening

This alternative would have greater environmental impacts and greater cost than the preferred alternative. Greater environmental impacts would stem primarily from the longer span and raise in vertical alignment of approximately 6 ft. This would result in increased impacts to South Fork Buck Creek. In addition, the larger structure and increased vertical alignment would contribute to approximately \$250,000 of additional cost when compared to the preferred alternative. Although this alternative meets the purpose and need of the project, it was ultimately dismissed for a more feasible and prudent alternative.

Three-Span Reinforced Concrete Slab Bridge (Alternative 3)

This alternate would consist of replacing the existing structure with a 63 ft. long, 3 span, 16 in. deep reinforced concrete slab bridge. The scope of work for this alternative would include:

- Construction of reinforced concrete bridge approaches
- New concrete bridge railing, railing transitions, and guardrail
- Riprap would be placed along the spill slopes and bridge cone

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- The bridge would be supported on integral end bents on piles, and extended pile bents at all interior supports.
- Bridge piles would be cored and set in rock
- Raise vertical alignment by approximately 3 ft. 6 in.

This alternative would have greater environmental impacts and greater cost than the preferred alternative. Greater environmental impacts would stem primarily from the longer span and raise in vertical alignment of approximately 3 ft. 6 in. This would result in increased impacts to South Fork Buck Creek. In addition, the larger structure, and increased vertical alignment would contribute to approximately \$70,000 of additional cost when compared to the preferred alternative. Although this alternative meets the purpose and need of the project, it was ultimately dismissed for a more feasible and prudent alternative.

The Do Nothing Alternative is not feasible, prudent or practicable because (Mark all that apply):

It would not correct existing capacity deficiencies;

It would not correct existing safety hazards;

It would not correct the existing roadway geometric deficiencies;

It would not correct existing deteriorated conditions and maintenance problems; or

It would result in serious impacts to the motoring public and general welfare of the economy.

Other (Describe)

X

ROADWAY CHARACTER:

Functional Classification: Rural Major Collector
 Current ADT: 3165 VPD (2016) Design Year ADT: 3,656 VPD (2041)
 Design Hour Volume (DHV): 300 Truck Percentage (%) 10
 Designed Speed (mph): 50 Legal Speed (mph): 50

Existing			Proposed		
Number of Lanes:	2		2		
Type of Lanes:	10 ft. Travel (NB & SB)		11 ft. Travel (NB & SB)		
Pavement Width:	28	ft.	30	ft.	
Shoulder Width:	4	ft.	4	ft.	
Median Width:	N/A	ft.	N/A	ft.	
Sidewalk Width:	N/A	ft.	N/A	ft.	

Setting: ☐ Urban ☐ Suburban ☒ Rural
 Topography: ☐ Level ☒ Rolling ☐ Hilly

If the proposed action has multiple roadways, this section should be filled out for each roadway.

DESIGN CRITERIA FOR BRIDGES:

Structure/NBI Number(s): 011-31-06119 (NBI: 003060) Sufficiency Rating: 67.1, INDOT Culvert Inspection Report
 (Rating, Source of Information)

Existing			Proposed		
Bridge Type:	Concrete Channel Beam		Concrete Channel Beam		
Number of Spans:	1		1		
Weight Restrictions:	N/A	ton	N/A	ton	
Height Restrictions:	N/A	ft.	N/A	ft.	
Curb to Curb Width:	28.2	ft.	30	ft.	
Outside to Outside Width:	30.2	ft.	32.4	ft.	
Shoulder Width:	4	ft.	4	ft.	
Length of Channel Work:			102	ft.	

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Describe bridges and structures; provide specific location information for small structures.

Remarks: The project involves the replacement of Bridge No. 011-31-06119 (NBI: 003060) that carries SR-11 over South Fork Buck Creek. This structure is a single span, 24 ft. long, reinforced concrete slab bridge that was built in 1966. This bridge is not listed as a select or non-select bridge and is not on the latest listing of Historic Bridges. No other bridges or structures will be impacted by this project.

Yes ☒ No ☐ N/A ☐

Will the structure be rehabilitated or replaced as part of the project?

If the proposed action has multiple bridges or small structures, this section should be filled out for each structure.

MAINTENANCE OF TRAFFIC (MOT) DURING CONSTRUCTION:

	Yes	No
Is a temporary bridge proposed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Is a temporary roadway proposed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Will the project involve the use of a detour or require a ramp closure? (describe in remarks)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Provisions will be made for access by local traffic and so posted.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Provisions will be made for through-traffic dependent businesses.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Provisions will be made to accommodate any local special events or festivals.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Will the proposed MOT substantially change the environmental consequences of the action?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Is there substantial controversy associated with the proposed method for MOT?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Remarks: The Maintenance of Traffic (MOT) for this project will involve a detour that utilizes SR-62 and SR-337. This detour will add approximately 2.9 miles for traveling motorists. Please refer to Appendix B, page B9 for the plan sheet detailing MOT.

The closures/lane restrictions will pose a temporary inconvenience to traveling motorists (including school buses and emergency services); however, no significant delays are anticipated, and all inconveniences will cease upon project completion. Delays may occur during construction but will cease with project completion.

ESTIMATED PROJECT COST AND SCHEDULE:

Engineering: \$ 392,870 (2020-21) Right-of-Way: \$ 25,000 (2020) Construction: \$ 804,450 (2021)

Anticipated Start Date of Construction: Spring of 2021

Date project incorporated into STIP July 2, 2019

Is the project in an MPO Area? Yes ☐ No ☒

If yes,

Name of MPO N/A

Location of Project in TIP N/A

Date of incorporation by reference into the STIP N/A

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RIGHT OF WAY:

Land Use Impacts	Amount (acres)	
	Permanent	Temporary
Residential	0.539	0.012
Commercial	0	0
Agricultural	0	0
Forest	0	0
Wetlands	0	0
Other:	0	0
Other:	0	0
TOTAL	0.539	0.012

Describe both Permanent and Temporary right-of-way and describe their current use. Typical and Maximum right-of-way widths (existing and proposed) should also be discussed. Any advance acquisition or reacquisition, either known or suspected, and there impacts on the environmental analysis should be discussed.

Remarks: Existing right-of-way within the project area is limited to the pavements edge and is used strictly for roadway preservation.

This project requires approximately 0.539 acre of permanent right-of-way (ROW) from seven residential properties. In addition, this project will also require approximately 0.012 acre of temporary ROW from one residential property.

If the scope of work or permanent or temporary right-of-way amounts change, the INDOT Environmental Services Division (ESD) and the INDOT District Environmental Section will be contacted immediately.

Part III – Identification and Evaluation of Impacts of the Proposed Action

SECTION A – ECOLOGICAL RESOURCES

	<u>Presence</u>	<u>Impacts</u>	
		<u>Yes</u>	<u>No</u>
Streams, Rivers, Watercourses & Jurisdictional Ditches	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Federal Wild and Scenic Rivers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
State Natural, Scenic or Recreational Rivers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nationwide Rivers Inventory (NRI) listed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Outstanding Rivers List for Indiana	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Navigable Waterways	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Remarks: Based on a desktop review, a site visit on September 19, 2017, the aerial map of the project area (Appendix B, page B3), and the water resources map in the Red Flag Investigation (RFI) report (Appendix E, page E8), five stream segments are located within the 0.5 mile search radius. There is one stream, South Fork Buck Creek, present within the project area.

A *Waters of the U.S. Determination/Wetland Delineation Report* was approved by INDOT Ecology and Waterway Permitting Office on April 24, 2018. Please refer to Appendix F, pages F1 to F20 for the *Waters of the U.S. Determination/ Wetland Delineation Report*. It was determined that South Fork Buck Creek is a likely jurisdictional waterway. The USACE makes all final determinations regarding jurisdiction.

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The Federal Wild and Scenic Rivers listing, State Natural, Scenic, and Recreational Rivers listing, the Nationwide Rivers Inventory, Outstanding Rivers List for Indiana, and the U.S. Army Corps of Engineers list of Navigable Waterways were reviewed by environmental specialists at GAI to determine the possible presence of one of these waterways within the project area. No listed waterways were identified within or adjacent to the project area.

South Fork Buck Creek is a perennial stream that flows north to south through the project area and exhibits an ordinary high-water mark (OHWM). The OHWM is 6 ft. wide and 8 in. deep. Impacts to South Fork Buck Creek will include the installation of the new structure, placement of riprap, and two temporary cofferdams to dewater the work area. Total permanent and temporary impacts below the OHWM will equal 110 linear feet or 0.045 acre. Stream mitigation will not be required for this project as cumulative stream impacts will be less than 300 linear feet. Permits for impacts to South Fork Buck Creek will be necessary. Please refer to the *Permits* section of this document for details.

Early coordination letters were sent to the Indiana Department of Natural Resources, Division of Fish and Wildlife (IDNR-DFW), the U.S. Army Corps of Engineers (USACE), and the U.S. Fish and Wildlife Service (USFWS) on October 4, 2017 (Appendix C, pages C1 to C2). The IDNR-DFW indicated in their letter dated November 3, 2017 (Appendix C, pages C16 to C19), that the project would require formal approval from their agency for construction in a floodway pursuant to the Flood Control Act. The IDNR-DFW letter also provided a list of recommendations to help avoid and minimize impacts to South Fork Buck Creek.

The USACE did not respond to the early coordination letter.

The USFWS responded in a letter dated October 4, 2017 (Appendix C, pages C20 to C21), and did not provide any specific recommendations regarding impacts to South Fork Buck Creek.

All applicable recommendations from the IDNR-DFW are included in the *Environmental Commitments* section of this CE document.

Other Surface Waters

Reservoirs

Lakes

Farm Ponds

Detention Basins

Storm Water Management Facilities

Other: _____

Presence

Impacts

Yes	No

Remarks:

Based on a desktop review, a site visit on September 19, 2017 by GAI, the aerial map of the project area (Appendix B, page B3), and the water resources map in the Red Flag Investigation (RFI) report (Appendix E, page E8), there are seven other surface waters within the 0.5 mile search radius. No other surface waters are present within the project area; therefore, no impacts are expected.

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Presence

Impacts

Yes

No

Wetlands

☐
☐
☐

Total wetland area: 0 acre(s)

Total wetland area impacted: 0 acre(s)

(If a determination has not been made for non-isolated/isolated wetlands, fill in the total wetland area impacted above.)

Wetland No.	Classification	Total Size (Acres)	Impacted Acres	Comments
N/A	N/A	N/A	N/A	N/A

Documentation

ES Approval Dates

Wetlands (Mark all that apply)

Wetland Determination

Wetland Delineation

USACE Isolated Waters Determination

Mitigation Plan

X

April 24, 2018

Improvements that will not result in any wetland impacts are not practicable because such avoidance would result in (Mark all that apply and explain):

Substantial adverse impacts to adjacent homes, business or other improved properties;

Substantially increased project costs;

Unique engineering, traffic, maintenance, or safety problems;

Substantial adverse social, economic, or environmental impacts, or

The project not meeting the identified needs.

Measures to avoid, minimize, and mitigate wetland impacts need to be discussed in the remarks box.

Remarks:

Based on a review of the National Wetlands Inventory (NWI) online mapper (<https://www.fws.gov/wetlands/data/Mapper.html>), a site visit on September 19, 2017 by GAI, the USGS topographic map (Appendix B, page B2), and the RFI report (Appendix E, pages E1 to E16), nine wetlands are located within the 0.5 mile search radius. There are two NWI mapped wetlands present within or adjacent to the project area.

A *Waters of the U.S. Determination/Wetland Delineation Report* was approved by INDOT Ecology and Waterway permitting Office on April 24, 2018. Please refer to Appendix F, pages F1 to F20 for the *Waters of the U.S. Determination/ Wetland Delineation Report*. It was determined that no wetlands exist within the project area. The USACE makes all final determinations regarding jurisdiction.

The two mapped NWI wetlands within the project area are classified as a R5UBH and R4SBCx wetlands. The R4SBCx wetland feature appears to be a mis-mapped feature within the project area. However, the R5UBH wetland is confined to the channel of South Fork Buck Creek. Therefore, this mapped NWI wetland is considered to be a stream feature, not a wetland. Impacts to this feature will be permitted for under stream impacts. No wetlands are known to exist within the project area. Therefore, no direct or indirect impacts to wetlands will occur with this project.

Early coordination letters were sent to the IDNR-DFW, USACE, and the USFWS on October 4, 2017 (Appendix C, pages C1 to C2). The IDNR-DFW responded on November 3, 2017 (Appendix C, pages C16 to C19), with recommendations to avoid or mitigate impacts to wetlands.

The USACE did not respond to the early coordination letter.

The USFWS responded in a letter dated October 4, 2017 (Appendix C, pages C20 to C21) and did not provide any specific recommendations regarding wetlands.

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All applicable recommendations provided by the IDNR-DFW are included in the *Environmental Commitments* section of this CE document.

	<u>Presence</u>	<u>Impacts</u>	
		<u>Yes</u>	<u>No</u>
Terrestrial Habitat	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Unique or High Quality Habitat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Use the remarks box to identify each type of habitat and the acres impacted (i.e. forested, grassland, farmland, lawn, etc).

Remarks: Based on a desktop review, a site visit on September 19, 2017 by GAI, and the aerial map of the project area (Appendix B, page B3), a number of large shade trees surround South Fork Buck Creek and a narrow forested riparian habitat surrounds the southern side of the stream. This habitat supports a variety of birds (passerines, waterfowl, and raptors), rodents, and mammals typical to edge habitat within fragmented forests, agricultural fields, and residential lawns. This habitat would not be considered prime or unique. Impacts to this habitat will occur due to construction access, tree clearing, and placement of riprap. Vegetation within the project area include American sycamore (*Platanus occidentalis*), red maple (*Acer rubrum*), box elder (*Acer negundo*), jewel weed (*Impatiens capensis*), rough leaf goldenrod (*Solidago rugose*), beggartick (*Bidens frondosa*), boneset (*Eupatorium perfoliatum*), rice cut grass (*Leersia oryzoides*), smart weed (*Polygonum hydropiperoides*), reed canary grass (*Phalaris arundinacea*), and honey suckle (*Lonicera maackii*). Approximately 0.05 acre of tree trimming/clearing is anticipated to complete this project. Total soil disturbance for this project will not exceed 0.50 acre. Avoidance alternatives are not practical for this project as impacts are necessary to meet the purpose and need of the project. However, impacts will be reduced to the greatest extent practicable to complete this project.

Early coordination letters were sent to the IDNR-DFW and the USFWS on October 4, 2017 (Appendix C, pages C1 to C2). The IDNR-DFW responded on November 3, 2017 (Appendix C, pages C16 to C19), with recommendations to avoid or minimize impacts to riparian habitat.

The USFWS responded in a letter dated October 4, 2017 (Appendix C, pages C20 to C21) and did not offer any specific recommendations regarding terrestrial habitat.

All applicable recommendations provided by the IDNR-DFW can be found in the *Environmental Commitments* section of this CE document.

If there are high incidences of animal movements observed in the project area, or if bridges and other areas appear to be the sole corridor for animal movement, consideration of utilizing wildlife crossings should be taken.

Karst

Is the proposed project located within or adjacent to the potential Karst Area of Indiana?
Are karst features located within or adjacent to the footprint of the proposed project?

Yes	No
<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

If yes, will the project impact any of these karst features?

Use the remarks box to identify any karst features within the project area. (Karst investigation must comply with the Karst MOU, dated October 13, 1993)

Remarks: Based on a desktop review, the project is located inside the designated karst region of Indiana as outlined in the October 13, 1993 Memorandum of Understanding (MOU). According to the topo map of the project area (Appendix B, page B2), and the RFI report (Appendix E, pages E1 to E16), there are no karst features identified within or adjacent to the project area. In the early coordination response, the Indiana Geological Survey (IGS) did indicate that karst features exist in the project area (Appendix C, pages C11 to C13). The IGS also noted that the project area has a high bedrock resource potential. Response from IGS has been communicated with the designer on February 21, 2020. No impacts are expected.

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Threatened or Endangered Species

Within the known range of any federal species
Any critical habitat identified within project area
Federal species found in project area (based upon informal consultation)
State species found in project area (based upon consultation with IDNR)

Presence

X
X

Impacts

Yes	No
	X
	X

Is Section 7 formal consultation required for this action?

Yes	No
	X

Remarks:

Based on a desktop review and the RFI report (Appendix E, pages E1 to E16), completed by GAI on August 13, 2018, the IDNR Harrison County Endangered, Threatened and Rare (ETR) Species List has been checked and is included in (Appendix E, pages E9 to E16). The highlighted species on the list reflect the federal and state identified ETR species located within the county. According to the IDNR-DFW early coordination response letter dated November 3, 2017 (Appendix C, pages C16 to C19), the Natural Heritage Program's Database has been checked and to date, no plant or animal species listed as state or federally threatened endangered, or rare have been reported to occur in the project vicinity.

Indiana and Northern Long-Eared Bat

Project information was submitted through the USFWS's Information for Planning and Consultation (IPaC) portal, and an official species list was generated (Appendix C, pages C23 to C29). The project is within range of the federally endangered Indiana bat (*Myotis sodalis*) and the federally threatened northern long-eared bat (NLEB) (*Myotis septentrionalis*). Other species were found to be present within or adjacent to the project area along with the Indiana bat and NLEB. Refer to paragraph below.

The project qualifies for the *Range-wide Programmatic Informal Consultation for the Indiana bat and northern long-eared bat (NLEB)*, dated May 2016 (revised February 2018), between FHWA, Federal Railroad Administration (FRA), Federal Transit Administration (FTA), and USFWS. An effect determination key was completed on February 17, 2020, and based on the responses provided, the project was found to "Not Likely to Adversely Affect" the Indiana bat and/or the NLEB. INDOT reviewed and verified the effect finding on March 05, 2020 and requested USFWS's review of the finding (Appendix C, pages C32 to C47). No response was received from USFWS within the 14-day review period; therefore, it was concluded they concur with the finding. Avoidance and Mitigation Measures (AMMs) are included as firm commitments in the *Environmental Commitments* section of this document.

The official species list generated from IPaC indicated one other federally endangered species, the Gray Bat (*Myotis grisescens*), is present within the project area. Coordination with the USFWS occurred on February 10, 2020 regarding the Gray bat (Appendix C, pages C48 to C51). It was determined that a "Not Likely to Adversely Affect" determination is appropriate for the Gray Bat as long as appropriate erosion and sediment control measures are implemented. A firm commitment to this effect is included in the *Environmental Commitments* of this document.

Migratory Birds

Bridge No. 011-31-06119 has shown evidence of use (i.e. nests) by a bird species protected under the Migratory Bird Treaty Act (MBTA) during the July 7, 2018 inspection. Avoidance and minimization measures must be implemented prior to the start of and during the nesting season. Nests without eggs or young should be removed prior to construction during the non-nesting season (September 8 – April 30) and during the nesting season if no eggs or young are present. Nests with eggs or young cannot be removed or disturbed during the nesting season (May 1 – September 7). Nests with eggs or young should be screened or buffered from active construction. Details of the required procedures are outlined in the "Potential Migratory Bird on Structure Unique Special Provision". This firm commitment is included in the *Environmental Commitments* of this document.

This precludes the need for further consultation on this project as required under Section 7 of the Endangered Species Act, as amended. If new information on endangered species at the site becomes available, or if project plans are changed, USFWS will be contacted for consultation.

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SECTION B – OTHER RESOURCES

Drinking Water Resources

Wellhead Protection Area
Public Water System(s)
Residential Well(s)
Source Water Protection Area(s)
Sole Source Aquifer (SSA)

Presence

X

Impacts

Yes	No
	X

If a SSA is present, answer the following:

Is the Project in the St. Joseph Aquifer System?
Is the FHWA/EPA SSA MOU Applicable?
Initial Groundwater Assessment Required?
Detailed Groundwater Assessment Required?

Yes	No

Remarks:

Sole Source Aquifer

The project is located in Harrison County, which is not located within the area of the St. Joseph Sole Source Aquifer, the only legally designated sole source aquifer in the state of Indiana. Therefore, the FHWA/EPA Sole Source Aquifer Memorandum of Understanding (MOU) is not applicable to this project. Therefore, a detailed groundwater assessment is not needed, and no impacts are expected.

Wellhead Protection Area and Source Water

The Indiana Department of Environmental Management's Wellhead Proximity Determinator website (<http://www.in.gov/idem/cleanwater/pages/wellhead/>) was accessed on May 7, 2020 by GAI. This project is not located within a Wellhead Protection Area or Source Water Area. In an early coordination letter dated October 22, 2019, IDEM stated the project is not located within a wellhead area (Appendix C, page C10). No impacts are expected.

Water Wells

The Indiana Department of Natural Resources Water Well Record Database website (<https://www.in.gov/dnr/water/3595.htm>) was accessed on October 22, 2019 by GAI. The nearest well is located approximately 0.04 mile northeast of the project area. The features will not be affected because of the proximity of the well from the project area. Therefore, no impacts are expected. Should it be determined during the right-of-way phase that these wells are affected, a cost to cure will likely be included in the appraisal to restore the wells.

Urban Area Boundary

Based on a desktop review of the INDOT MS4 website (<https://entapps.indot.in.gov/MS4/>) by GAI on October 22, 2019, and the RFI report; this project is not located in an Urban Area Boundary location. No impacts are expected.

Public Water System(s)

Based on a desktop review, a site visit on September 19, 2017 by GAI, and the aerial map of the project area (Appendix B, page B3), no public water systems were identified. Therefore, no impacts are expected.

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Flood Plains

Longitudinal Encroachment
 Transverse Encroachment
 Project located within a regulated floodplain
 Homes located in floodplain within 1000' up/downstream from project

Presence

X
X

Impacts

Yes	No
X	
X	

Discuss impacts according to classification system described in the "Procedural Manual for Preparing Environmental Studies".

Remarks: Based on a desktop review of The Indiana Department of Natural Resources Indiana Floodway Information Portal website (<http://dnrmaps.dnr.in.gov/appsphp/fdms/>) by GAI on September 18, 2019 and the RFI report; this project is located in a regulatory floodplain as determined from approved IDNR floodplain maps (Appendix F, page F13). An early coordination letter was sent on September 19, 2019 to the local Floodplain Administrator. The floodplain administrator did not respond within the 30-day time frame.

This project qualifies as a Category 4 per the INDOT CE Manual, which states that category 4 project include projects involving replacement of existing drainage structures on essentially the same alignment. No homes are located within the base floodplain within 1,000 feet upstream and no homes are located within the base floodplain within 1,000 feet downstream. The proposed structure will have an effective capacity such that backwater surface elevations are not expected to significantly increase. As a result, there will be no significant adverse impacts on natural and beneficial floodplain values; no significant change in flood risks; and no significant increase in potential for interruption or termination of emergency service or emergency evacuation routes. Therefore, it has been determined that this encroachment is not significant.

Farmland

Agricultural Lands
 Prime Farmland (per NRCS)

Presence

Impacts

Yes	No

Total Points (from Section VII of CPA-106/AD-1006*
**If 160 or greater, see CE Manual for guidance.*

See CE Manual for guidance to determine which NRCS form is appropriate for your project.

Remarks: Based on a desktop review, a site visit on September 19, 2017 by GAI, the aerial map of the project area (Appendix B, page B3), there is no land that meets the definition of farmland under the Farmland Protection Policy Act (FPPA) within or adjacent to the project area. The requirements of the FPPA do not apply to this project; therefore, no impacts are expected. An early coordination letter was sent on October 4, 2017 (Appendix C, pages C1 to C2), to the Natural Resources Conservation Services (NRCS) The NRCS responded on October 4, 2017 (Appendix C, page C14) stating that the proposed project will not cause a conversion of prime farmland.

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SECTION C – CULTURAL RESOURCES

	Category	Type	INDOT Approval Dates	N/A
Minor Projects PA Clearance	B	4 & 12	February 7, 2020	

Eligible and/or Listed Resource Present

Results of Research

Archaeology	
NRHP Buildings/Site(s)	
NRHP District(s)	
NRHP Bridge(s)	

Project Effect

No Historic Properties Affected ☐ No Adverse Effect ☐ Adverse Effect ☐

Documentation Prepared

Documentation (mark all that apply)

	ES/FHWA Approval Date(s)	SHPO Approval Date(s)
Historic Properties Short Report		
Historic Property Report		
Archaeological Records Check/ Review		
Archaeological Phase Ia Survey Report	February 7, 2020	N/A
Archaeological Phase Ic Survey Report		
Archaeological Phase II Investigation Report		
Archaeological Phase III Data Recovery		
APE, Eligibility and Effect Determination		
800.11 Documentation		

Memorandum of Agreement (MOA) ☐

MOA Signature Dates (List all signatories)

Describe all efforts to document cultural resources, including a detailed summary of the Section 106 process, using the categories outlined in the remarks box. The completion of the Section 106 process requires that a Legal Notice be published in local newspapers. Please indicate the publication date, name of paper(s) and the comment period deadline. Likewise include any further Section 106 work which must be completed at a later date, such as mitigation or deep trenching.

Remarks: On February 7, 2020 the INDOT Cultural Resource Office (CRO) determined that this project falls within the guidelines of Category B, Types 4 and 12 and Category A, Type 9 under the Minor Projects Programmatic Agreement, (Appendix D, pages D1 to D5).

Category B, Type 4: Includes the installation of new safety appurtenances, including but not limited to, guardrails, barriers, glare screens, and crash attenuators.

Category B, Type 12: Includes replacement, widening, or raising the elevation of the superstructure on existing bridges, and bridge replacement projects.

Category A, Type 9: Includes installation, repair, or replacement of erosion control measures along roadways, waterways and bridge piers within previously disturbed soils.

An archaeological survey was required as part of the project takes place in undisturbed soils. The

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archeological survey concluded that no archeological resources/sites exists within the project area and it recommended that the project be allowed to proceed as planned (Appendix D, pages D8 to D9). No further consultation is required. This completes the Section 106 process and the responsibilities of the FHWA under Section 106 have been fulfilled.

SECTION D – SECTION 4(f) RESOURCES/ SECTION 6(f) RESOURCES

Section 4(f) Involvement (mark all that apply)

Parks & Other Recreational Land

Publicly owned park
Publicly owned recreation area
Other (school, state/national forest, bikeway, etc.)

Presence

Use

Yes	No

Evaluations Prepared

Programmatic Section 4(f)*
“De minimis” Impact*
Individual Section 4(f)

FHWA Approval date

--

Wildlife & Waterfowl Refuges

National Wildlife Refuge
National Natural Landmark
State Wildlife Area
State Nature Preserve

Presence

Use

Yes	No

Evaluations Prepared

Programmatic Section 4(f)*
“De minimis” Impact*
Individual Section 4(f)

FHWA Approval date

--

Historic Properties

Sites eligible and/or listed on the NRHP

Presence

--

Use

Yes	No

Evaluations Prepared

“De minimis” Impact*
Individual Section 4(f)

FHWA Approval date

--

*FHWA approval of the environmental document also serves as approval of any Section 4(f) Programmatic and/or De minimis evaluation(s) discussed below.

Discuss Programmatic Section 4(f) and “de minimis” Section 4(f) impacts in the remarks box below. Individual Section 4(f) documentation must be separate Draft and Final documents. For further discussions on Programmatic, “de minimis” and Individual Section 4(f) evaluations please refer to the “Procedural Manual for the Preparation of Environmental Studies”. Discuss proposed alternatives that satisfy the requirements of Section 4(f).

Remarks: Section 4(f) of the U.S. Department of Transportation Act of 1966 prohibits the use of certain public and historic lands for federally funded transportation facilities unless there is no feasible and prudent alternative.

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The law applies to significant publicly owned parks, recreation areas, wildlife / waterfowl refuges, and NRHP eligible or listed historic properties regardless of ownership. Lands subject to this law are considered Section 4(f) resources.

Based on a desktop review, a site visit on September 19, 2017 by GAI, the aerial map of the project area (Appendix B, page B3), and the RFI report (Appendix E, pages E1 to E16) there are no 4(f) resources located within the 0.5 mile search radius. There are no Section 4(f) resources within or adjacent to the project area. Therefore, no use is expected.

Section 6(f) Involvement

Presence

Use

Yes

No

Section 6(f) Property

☐
☐
☐

Discuss proposed alternatives that satisfy the requirements of Section 6(f). Discuss any Section 6(f) involvement.

Remarks:

The U.S. Land and Water Conservation Fund Act of 1965 established the Land and Water Conservation Fund (LWCF), which was created to preserve, develop, and assure accessibility to outdoor recreation resources. Section 6(f) of this Act prohibits conversion of lands purchased with LWCF monies to a non-recreation use.

A review of 6(f) properties on the Land and Water Conservation Fund (LWCF) website at <https://www.lwcfcoalition.com/tools> revealed a total of 11 properties in Harrison County (Appendix I, page I1). In addition to the LWCF website review, IDNR's Division of Outdoor Recreation list at https://www.in.gov/indot/files/LWCF%20Indiana%20County%20List_02-25-2020.pdf was also reviewed (Appendix I, page I2). This list revealed 15 properties within Harrison County. None of these properties are located within or adjacent to the project area. Therefore, there will be no impacts to 6(f) resources as a result of this project.

SECTION E – Air Quality

Air Quality

Conformity Status of the Project

Is the project in an air quality non-attainment or maintenance area?

Yes

No

☐
☒

If YES, then:

Is the project in the most current MPO TIP?

☐
☐

Is the project exempt from conformity?

☐
☐

If the project is NOT exempt from conformity, then:

Is the project in the Transportation Plan (TP)?

☐
☐

Is a hot spot analysis required (CO/PM)?

☐
☐

Level of MSAT Analysis required?

Level 1a ☒ Level 1b ☐ Level 2 ☐ Level 3 ☐ Level 4 ☐ Level 5 ☐

Remarks:

This project is included in the Fiscal Year (FY) 2020-2024 Statewide Transportation Improvement Program (STIP) (Appendix G, page G1).

This project is located in Harrison County, which is currently in attainment for all criteria pollutants according to IDEM's website: <https://www.in.gov/indem/airquality/2339.htm>. Therefore, the conformity procedures of 40 CFR Part 93 do not apply.

This project is of a type qualifying as a categorical exclusion (Group 1) under 23 CFR 771.117(c), or exempt

This is page 16 of 23 Project name: SR-11 over South Fork Buck Creek, Bridge Replacement Date: May 7, 2020

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under the Clean Air Act conformity rule under 40 CFR 93.126, and as such, a Mobile Source Air Toxics analysis is not required.

SECTION F - NOISE

Noise

Yes

No

Is a noise analysis required in accordance with FHWA regulations and INDOT's traffic noise policy?

☐☒

No Yes/ Date

ES Review of Noise Analysis

☐☐

Remarks:

This project is a Type III project. In accordance with 23 CFR 772 and the current *Indiana Department of Transportation Traffic Noise Analysis Procedure*, this action does not require a formal noise analysis.

SECTION G – COMMUNITY IMPACTS

Regional, Community & Neighborhood Factors

Will the proposed action comply with the local/regional development patterns for the area?

Yes

No

☒☐

Will the proposed action result in substantial impacts to community cohesion?

☐☒

Will the proposed action result in substantial impacts to local tax base or property values?

☐☒

Will construction activities impact community events (festivals, fairs, etc.)?

☐☒

Does the community have an approved transition plan?

☒☐

If No, are steps being made to advance the community's transition plan?

☐☐

Does the project comply with the transition plan? (explain in the remarks box)

☒☐

Remarks:

The proposed project will benefit the community by providing a structurally and hydraulically sufficient structure that will ensure continued passage for motorists over South Fork Buck Creek. The project is not anticipated to impact the tax base for the area or result in a division of the community. There are no long-term, foreseeable economic impacts from the project.

Harrison County has an approved Americans With Disabilities Act Self-Evaluation and Transition Plan (2014). However, since no pedestrian facilities are currently located within the project area, there are no pedestrian facilities being proposed, and pedestrian access is not a part of the purpose and need of the project, the Harrison County Americans with Disabilities Act Self-Evaluation and Transition Plan is not applicable to this project.

Indirect and Cumulative Impacts

Yes

No

Will the proposed action result in substantial indirect or cumulative impacts?

☐☒

Remarks:

Indirect impacts are effects which are caused by the action and are later in time or farther removed in distance but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density, or growth rate. Cumulative impacts affect the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such actions.

There have been no significant effects identified which could be caused by the proposed project and which will emerge in time or farther removed in distance with regard to indirect impacts. In addition, there have been no significant effects identified which may induce changes in the pattern of land use, population density or growth

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rate, or related effects on air and water or other natural systems, including ecosystems. Additionally, with regard to cumulative impacts, no significant impacts on the environment have been identified which could result from the incremental impact of the proposed project when added to other past, present, and reasonably foreseeable future actions. This project involves the replacement of Bridge No. 011-31-06119. Therefore, this project is not likely to cause substantial or cumulative impacts.

Public Facilities & Services

Will the proposed action result in substantial impacts on health and educational facilities, public and private utilities, emergency services, religious institutions, airports, public transportation or pedestrian and bicycle facilities? *Discuss how the maintenance of traffic will affect public facilities and services.*

Yes

☐

No

☒

Remarks:

Based on a desktop review, a site visit on September 19, 2017 by GAI, the aerial map of the project area (Appendix B, page B3), and the RFI report (Appendix E, pages E1 to E16) there are no public facilities within the 0.5 mile search radius. There are no public facilities within or adjacent to the project area. Access to all properties will be maintained during construction. Therefore, no impacts are expected.

It is the responsibility of the project sponsor to notify school corporations and emergency services at least two weeks prior to any construction that would block or limit access.

Environmental Justice (EJ) (Presidential EO 12898)

During the development of the project were EJ issues identified?

Does the project require an EJ analysis?

If YES, then:

Are any EJ populations located within the project area?

Will the project result in adversely high or disproportionate impacts to EJ populations?

Yes

☐
☒

No

☒
☐
☐
☐
☒
☒

Remarks:

Under FHWA Order 6640.23A, FHWA and the project sponsor, as a recipient of funding from FHWA, are responsible to ensure that their programs, policies, and activities do not have a disproportionately high and adverse effect on minority or low-income populations. Per the current INDOT Categorical Exclusion Manual, an Environmental Justice (EJ) Analysis is required for any project that has two or more relocations or 0.5 acre of additional permanent right-of-way. The project will require the acquisition of 0.539 acre of additional permanent right-of-way and 0.012 acre of temporary ROW. Therefore, an EJ Analysis is required.

Potential EJ impacts are detected by locating minority and low-income populations relative to a reference population to determine if populations of EJ concern exists and whether there could be disproportionately high and adverse impacts to them. The reference population may be a county, city or town and is called the community of comparison (COC). In this project, the COC is Harrison County, Indiana. The community that overlaps the project area is called the affected community (AC). In this project, the AC is Census Tract 606. An AC has a population of concern for EJ if the population is more than 50% minority or low-income or if the low-income or minority population is 125% of the COC. Data from the US Census Bureau, 2013 – 2017 American Community Survey 5 Year Estimates, was obtained from the US Census Bureau Website <https://factfinder.census.gov/> on January 27, 2020 by GAI. The data collected for minority and low-income populations within the AC are summarized in the below table.

Table: Minority and Low-Income Data (U.S. Census Bureau, 2013–2017 American Community Survey 5–Year Estimates)		
	COC - (Harrison County, Indiana)	AC-1 - (Census Tract 606, Harrison County, Indiana)
Percent Minority	(4.34%)	(3.62%)
125% of COC	(5.42 %)	AC < 125% COC
EJ Population of Concern		No
Percent Low-Income	(12.87%)	(8.55%)
125% of COC	(16.08 %)	AC < 125% COC
EJ Population of Concern		No

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AC-1, Census Tract 606 has a percent minority of (3.62%) which is below 50% and is below the 125% COC threshold. Therefore, this AC does not contain minority population of EJ concern.

AC-1, Census Tract 606 has a percent low-income of (8.55%) which is below 50% and is below the 125% COC threshold. Therefore, this AC does not contain low-income populations of EJ concern.

Conclusion

The census data sheets, map, and calculations can be found in Appendix H, pages H1 to H4. No further environmental justice analysis is warranted.

Relocation of People, Businesses or Farms

Will the proposed action result in the relocation of people, businesses or farms?

Is a Business Information Survey (BIS) required?

Is a Conceptual Stage Relocation Study (CSRS) required?

Has utility relocation coordination been initiated for this project?

Yes	No
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>

Number of relocations: Residences: 0 Businesses: 0 Farms: 0 Other: 0

If a BIS or CSRS is required, discuss the results in the remarks box.

Remarks: No relocations of people, businesses, or farms will take place as a result of this project.

SECTION H – HAZARDOUS MATERIALS & REGULATED SUBSTANCES

Hazardous Materials & Regulated Substances (Mark all that apply)

Red Flag Investigation

Phase I Environmental Site Assessment (Phase I ESA)

Phase II Environmental Site Assessment (Phase II ESA)

Design/Specifications for Remediation required?

Documentation

<input checked="" type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

No Yes/ Date

ES Review of Investigations	<input type="checkbox"/>	August 13, 2018
------------------------------------	--------------------------	-----------------

Include a summary of findings for each investigation.

Remarks: Based on a review of GIS and available public records, a RFI was approved on August 13, 2018 by INDOT SAM Unit (Appendix E, pages E1 to E16). No sites with hazardous material concerns (hazmat sites) or sites involved with regulated substances were identified in or within 0.5 mile of the project area. Further investigation for hazardous material concerns or regulated substances is not required at this time.

A review of RFI resources took place again on July 10, 2019, and no substantive changes were found. Please refer to Appendix E, pages E17 to E18 for the email correspondence with the INDOT SAM Unit, stating that an addendum report for the RFI is not necessary for this project.

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SECTION I – PERMITS CHECKLIST

Permits (mark all that apply)

Likely Required

Army Corps of Engineers (404/Section10 Permit)

Individual Permit (IP)	<input type="checkbox"/>
Nationwide Permit (NWP)	<input type="checkbox"/>
Regional General Permit (RGP)	<input checked="" type="checkbox"/>
Pre-Construction Notification (PCN)	<input type="checkbox"/>
Other	<input type="checkbox"/>
Wetland Mitigation required	<input type="checkbox"/>
Stream Mitigation required	<input type="checkbox"/>

IDEM

Section 401 WQC	<input checked="" type="checkbox"/>
Isolated Wetlands determination	<input type="checkbox"/>
Rule 5	<input type="checkbox"/>
Other	<input type="checkbox"/>
Wetland Mitigation required	<input type="checkbox"/>
Stream Mitigation required	<input type="checkbox"/>

IDNR

Construction in a Floodway	<input checked="" type="checkbox"/>
Navigable Waterway Permit	<input type="checkbox"/>
Lake Preservation Permit	<input type="checkbox"/>
Other	<input type="checkbox"/>
Mitigation Required	<input type="checkbox"/>

US Coast Guard Section 9 Bridge Permit

Others (Please discuss in the remarks box below)

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

Remarks:

This project will likely require an IDEM 401 Water Quality Certification (WQC), a USACE 404 Regional General Permit (RGP) for impacts to jurisdictional Waters of the U.S, and an IDNR Construction in a Floodway (CIF) permit.

An early coordination letter was sent to the IDNR-DFW on October 4, 2017 (Appendix C, pages C1 to C2). The IDNR-DFW indicated in their letter dated November 3, 2017 (Appendix C, pages C16 to C19), that the project would require formal IDNR approval for construction in a floodway pursuant to the Flood Control Act unless it qualifies for a bridge exemption. This project does not qualify for a bridge exemption.

Applicable recommendations provided by IDNR and IDEM are included in the *Environmental Commitments* section of this document. If permits are found to be necessary, the conditions of the permit will be requirements of the project and will supersede these recommendations.

It is the responsibility of the project sponsor to identify and obtain all required permits.

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SECTION J- ENVIRONMENTAL COMMITMENTS

The following information should be provided below: List all commitments, name of agency/organization requesting the commitment(s), and indicating which are firm and which are for further consideration. The commitments should be numbered.

Remarks:

Firm:

1. If the scope of work or permanent or temporary right-of-way amounts change, the INDOT Environmental Services Division (ESD) and the INDOT District Environmental Section will be contacted immediately. (INDOT ESD and INDOT Seymour District)
2. It is the responsibility of the project sponsor to notify school corporations and emergency services at least two weeks prior to any construction that would block or limit access. (INDOT ESD)
3. Bridge No. 011-31-06119 has shown evidence of use (i.e. nests) by a bird species protected under the Migratory Bird Treaty Act (MBTA) during the July 7, 2018 inspection. Avoidance and minimization measures must be implemented prior to the start of and during the nesting season. Nests without eggs or young should be removed prior to construction during the non-nesting season (September 8 – April 30) and during the nesting season if no eggs or young are present. Nests with eggs or young cannot be removed or disturbed during the nesting season (May 1 – September 7). Nests with eggs or young should be screened or buffered from active construction. Details of the required procedures are outlined in the "Potential Migratory Bird on Structure USP". (INDOT ESD)
4. USFWS Bridge/Structure Assessment shall take place no earlier than two (2) years prior to the start of construction. If construction will begin after February 14, 2022, an inspection of the structure by a qualified individual, must be performed. Inspection of the structure should check for presence of bats/bat indicators and/or presence of birds. The results of the inspection must indicate no signs of bats or birds. If signs of bats or birds are documented during this inspection, the INDOT District Environmental Manager must be contacted immediately.
5. Implement temporary erosion and sediment control methods within areas of disturbed soil. All disturbed soil areas upon project completion will be vegetated following INDOT's standard specifications. (USFWS)
6. General AMM 1: Ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of all FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable AMM's. (USFWS)
7. Hibernacula AMM 1: For projects located within karst areas, on-site personnel will use best management practices, secondary containment measures, or other standard spill prevention and countermeasures to avoid impacts to possible bat hibernacula. Where practicable, a 300 foot buffer will be employed to separate fueling areas and other major containment risk activities from caves, sinkholes, losing streams, and springs in karst topography. (USFWS)
8. Lighting AMM 1: Direct all temporary lighting away from suitable habitat during the active season. (USFWS)
9. Tree Removal AMM 1: Modify all phases/aspects of the project (e.g., temporary work areas, alignments) to avoid tree removal. (USFWS)
10. Tree Removal AMM 2: Apply time of year restrictions for tree removal (October 1 through March 30) when bats are not likely to be present, or limit tree removal to 10 or fewer trees per project at any time of year within 100 feet of existing road/rail surface and outside of documented roosting/foraging habitat or travel corridors; visual emergence survey must be conducted with no bats observed. (USFWS)
11. Tree Removal AMM 3: Ensure tree removal is limited to that specified in project plans and ensure that contractors understand clearing limits and how they are marked in the field (e.g., install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits. (USFWS)
12. Tree Removal AMM 4: Do not remove documented Indiana bat or NLEB roosts that are still suitable for roosting, or trees within 0.25 miles of roosts, or documented foraging habitat any time of year. (USFWS)

For Further Consideration:

13. Riprap must not be placed in the active thalweg channel or placed in the streambed in a manner that precludes fish or aquatic organism passage (riprap must not be placed above the existing streambed elevation). Riprap may be used only at the toe of the sideslopes up to the ordinary high water mark (OHWM). The banks above the OHWM must be restored, stabilized, and revegetated using

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County Harrison Route SR-11 Des. No. 1600485

geotextiles and a mixture of grasses, sedges, wildflowers, shrubs, and trees native to [site indicated] and specifically for stream bank/floodway stabilization purposes as soon as possible upon completion. (IDNR-DFW)

14. Impacts to non-wetland forest of one (1) acre or more should be mitigated at a minimum 2:1 ratio. If less than one acre of non-wetland forest is removed in a rural setting, replacement should be at a 1:1 ratio based on area. Impacts to nonwetland forest under one (1) acre in an urban setting should be mitigated by planting five trees, at least 2 inches in diameter-at-breast height (dbh), for each tree which is removed that is 10 inches dbh or greater (5:1 mitigation based on the number of large trees). (IDNR-DFW)
15. Do not cut any trees suitable for Indiana bat or Northern Long-eared bat roosting from April 1 through September 30. (IDNR-DFW)
16. Do not excavate in the low flow area except for the placement of piers, foundations, and riprap, or removal of the old structure. (IDNR-DFW)
17. Do not construct any temporary runarounds, access bridges, causeways, cofferdams, diversions, or pumparounds. (IDNR-DFW)
18. Use minimum average 6 inch graded riprap stone extended below the normal water level to provide habitat for aquatic organisms in the voids. (IDNR-DFW)
19. Plant native hardwood trees along the top of the bank and right-of-way to replace the vegetation destroyed during construction. (IDNR-DFW)
20. Post "Do Not Mow or Spray" signs along the right-of-way. (IDNR-DFW)

Indiana Department of Transportation

County HarrisonRoute SR-11Des. No. 1600485

SECTION K- EARLY COORDINATION

Please list the date coordination was sent and all agencies that were contacted as a part of the development of this Environmental Study. Also, include the date of their response or indicate that no response was received. INDOT and FHWA are automatically considered early coordination participants and should only be listed if a response is received.

Remarks:

Agency	Coordination Sent	Response Received	Appendix Page(s)
U.S. Fish Wildlife Service	10/4/2017	10/4/2017	C20 to C21
Natural Resources Conservation Service	10/4/2017	10/4/2017	C14
Department of the Army, Louisville District, Corps of Engineers	10/4/2017	No Response	-
National Park Service, Midwest Regional Office	10/4/2017	No Response	-
U.S. Department of Housing & Urban Development, Chicago Regional Office	10/4/2017	No Response	-
Indiana Geological Survey, Environmental Geology Section	10/6/2017	10/6/2017	C11 to C13
IDNR, Division of Fish and Wildlife	10/4/2017	11/3/2017	C16 to C19
IDEM	10/4/2017	10/4/2017	C6 to C9
INDOT Aviation Section	10/4/2017	10/6/2017	C15
Harrison County Surveyor	10/4/2017	No Response	-
Harrison County Highway Department	10/4/2017	10/5/2017	C22
Floodplain Administrator	9/19/2019	No Response	-
IDEM, Office of Water Quality	9/19/2019	10/22/2019	C10

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Appendix A

INDOT Supporting Documentation

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Threshold Chart	A1

Categorical Exclusion Level Thresholds

	PCE	Level 1	Level 2	Level 3	Level 4 ¹
Section 106	Falls within guidelines of Minor Projects PA	“No Historic Properties Affected”	“No Adverse Effect”	-	“Adverse Effect” Or Historic Bridge involvement ²
Stream Impacts	No construction in waterways or water bodies	< 300 linear feet of stream impacts	≥ 300 linear feet of stream impacts	-	Individual 404 Permit
Wetland Impacts	No adverse impacts to wetlands	< 0.1 acre	-	< 1 acre	≥ 1 acre
Right-of-way³	Property acquisition for preservation only or none	< 0.5 acre	≥ 0.5 acre	-	-
Relocations	None	-	-	< 5	≥ 5
Threatened/Endangered Species (Species Specific Programmatic for Indiana bat & northern long eared bat)	“No Effect”, “Not likely to Adversely Affect” (Without AMMs ⁴ or with AMMs required for all projects ⁵)	“Not likely to Adversely Affect” (With any other AMMs)	-	“Likely to Adversely Affect”	Project does not fall under Species Specific Programmatic
Threatened/Endangered Species (Any other species)	Falls within guidelines of USFWS 2013 Interim Policy	“No Effect”, “Not likely to Adversely Affect”	-	-	“Likely to Adversely Affect”
Environmental Justice	No disproportionately high and adverse impacts	-	-	-	Potential ⁶
Sole Source Aquifer	Detailed Assessment Not Required	-	-	-	Detailed Assessment
Floodplain	No Substantial Impacts	-	-	-	Substantial Impacts
Coastal Zone Consistency	Consistent	-	-	-	Not Consistent
National Wild and Scenic River	Not Present	-	-	-	Present
New Alignment	None	-	-	-	Any
Section 4(f) Impacts	None	-	-	-	Any
Section 6(f) Impacts	None	-	-	-	Any
Added Through Lane	None	-	-	-	Any
Permanent Traffic Alteration	None	-	-	-	Any
Coast Guard Permit	None	-	-	-	Any
Noise Analysis Required	No	-	-	-	Yes
Air Quality Analysis Required	No	-	-	-	Yes ⁷
Approval Level <ul style="list-style-type: none"> District Env. Supervisor Env. Services Division FHWA 	Concurrence by INDOT District Environmental or Environmental Services	Yes	Yes	Yes Yes	Yes Yes Yes

¹Coordinate with INDOT Environmental Services. INDOT will then coordinate with the appropriate FHWA Environmental Specialist.

²Any involvement with a bridge processed under the Historic Bridge Programmatic Agreement.

³Permanent and/or temporary right-of-way.

⁴AMMs = Avoidance and Mitigation Measures.

⁵AMMs determined by the IPAC decision key to be needed that are listed in the USFWS *User's Guide for the Range-wide Programmatic Consultation for Indiana bat and Northern long-eared bat* as “required for all projects”.

⁶Potential for causing a disproportionately high and adverse impact.

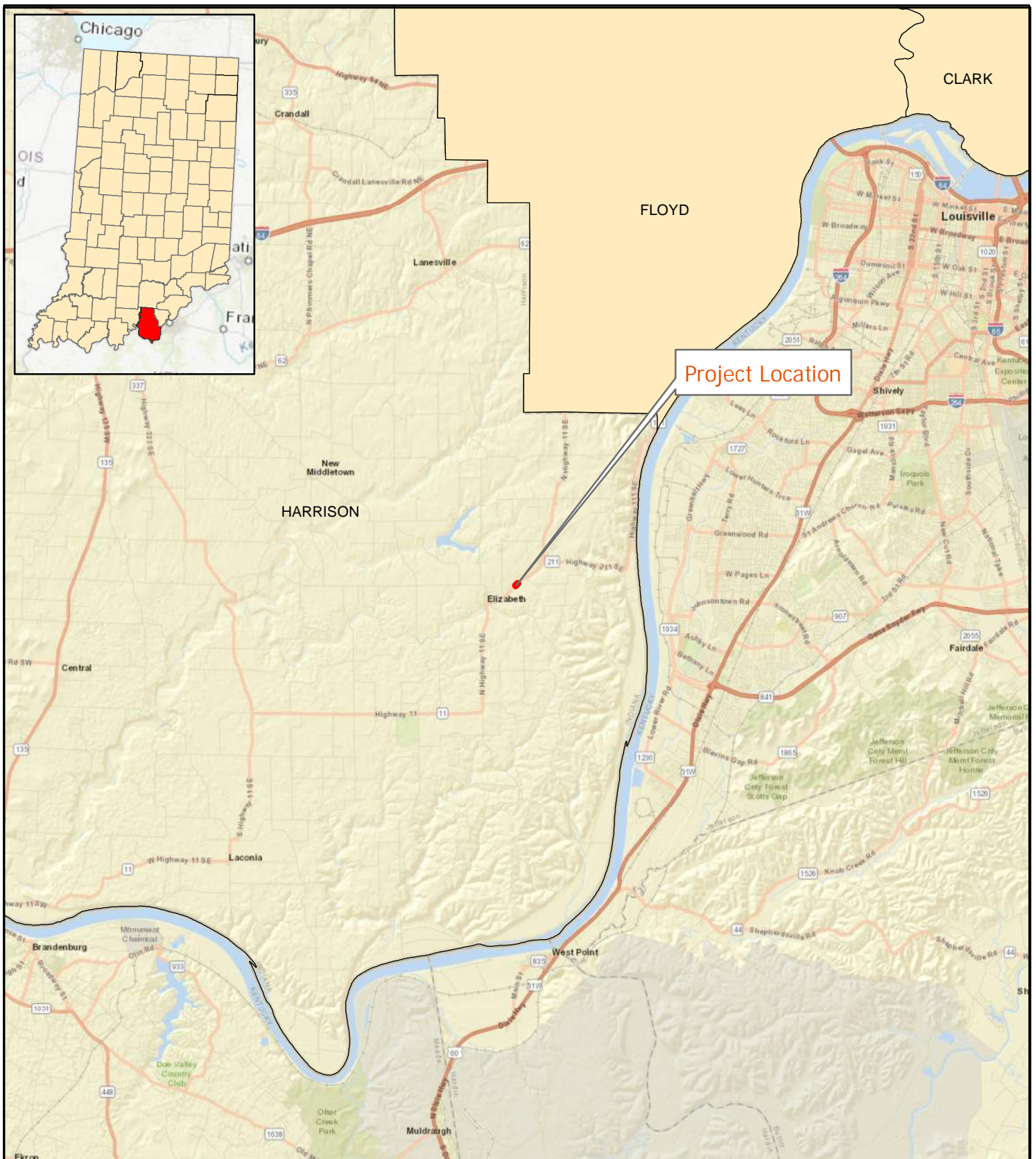
⁷Hot Spot Analysis and/or MSAT Quantitative Emission Analysis.

*Substantial public or agency controversy may require a higher-level NEPA document.

Appendix B

Graphics

Item	Appendix Page
Maps of the Project Area	B1 to B3
Photo Key Map	B4
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gai consultants

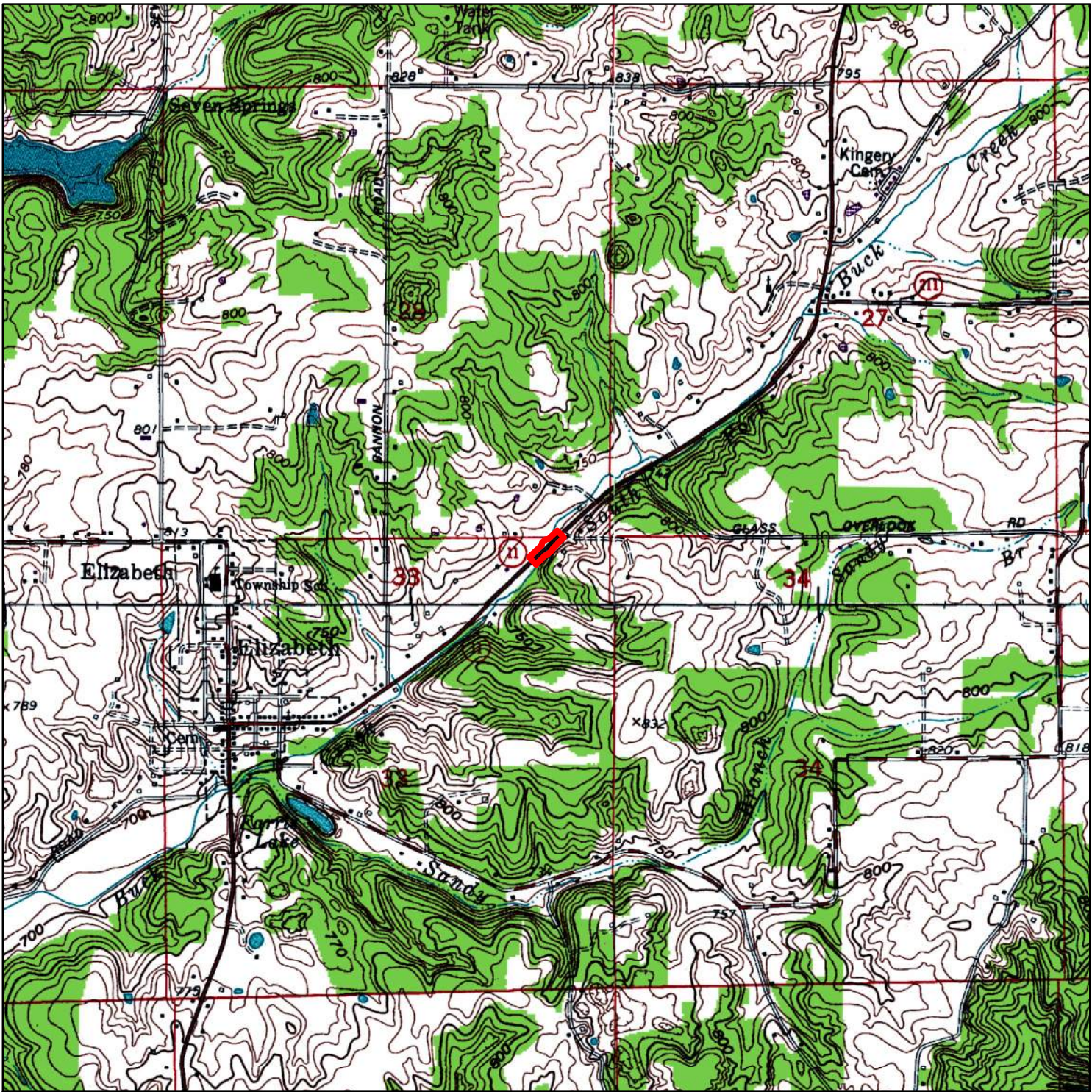
State Location Map

SR-11 over South Fork Buck Creek
Bridge Replacement Project
Harrison County, Indiana
Des 1600485

3

0 1 2 4 Miles

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community



USGS Topo Map

SR-11 over South Fork Buck Creek
 Bridge Replacement Project
 Harrison County, Indiana
 Des 1600485

Study Area



0 800 1,600 3,200 Feet

LANESVILLE USGS 7.5 Minute Topo Map

Service Layer Credits: United States Geological Survey (USGS)

3



Aerial Location Map

SR-11 over South Fork Buck Creek
Bridge Replacement Project
Harrison County, Indiana
Des 1600485

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad



0 35 70 140 Feet

Service Layer Credits: INDOT
© 2020 Microsoft Corporation © 2019 DigitalGlobe © CNES (2019) Distribution Airbus DS

3



Photo Location Map

SR-11 over South Fork Buck Creek
Bridge Replacement Project
Harrison County, Indiana
Des 1600485

Study Area

Interstate

State Route

US Route

Local Road

Railroad



Photo Point

Delineated Streams

0 35 70 140 Feet



Service Layer Credits: INDOT
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

3



Photo 1. Looking southwest toward culvert carrying SR 11 over SF Buck Creek.



Photo 2. Looking southwest toward culvert carrying SR 11 over SF Buck Creek.



Photo 3. Looking northeast along SR 11 toward culvert carrying SR 11 over SF Buck Creek.



Photo 4. Looking northeast along SR 11 toward culvert carrying SR 11 over SF Buck Creek.



Photo 5. Looking northwest from culvert carrying SR 11 over SF Buck Creek.



Photo 6. Looking northeast from culvert carrying SR 11 over SF Buck Creek.



Photo 7. Looking southeast from culvert carrying SR 11 over SF Buck Creek.



Photo 8. Looking south from culvert carrying SR 11 over SF Buck Creek.



Photo 9. Looking north along SF Buck Creek from SR 11.



Photo 10. Looking south along SF Buck Creek from SR 11.



Photo 11. Looking northwest from southeast bank of SF Buck Creek.



Photo 12. Looking southeast from northwest bank of SF Buck Creek.

PROJECT	DESIGNATION
1600485	1600485
CONTRACT	BRIDGE FILE
B-39896	011-31-10181

STRUCTURE INFORMATION				
STRUCTURE	TYPE	SPAN AND SKEW	OVER	STATION
011-31-10181	Reinforced Concrete Slab Bridge	1 Span: 30'-7 $\frac{3}{16}$ ", Skew: 30° 00' Right	South Fork Buck Creek	Sta. 113+73.50 Line "A"

INDIANA DEPARTMENT OF TRANSPORTATION



BRIDGE PLANS

FOR SPANS OVER 20 FEET

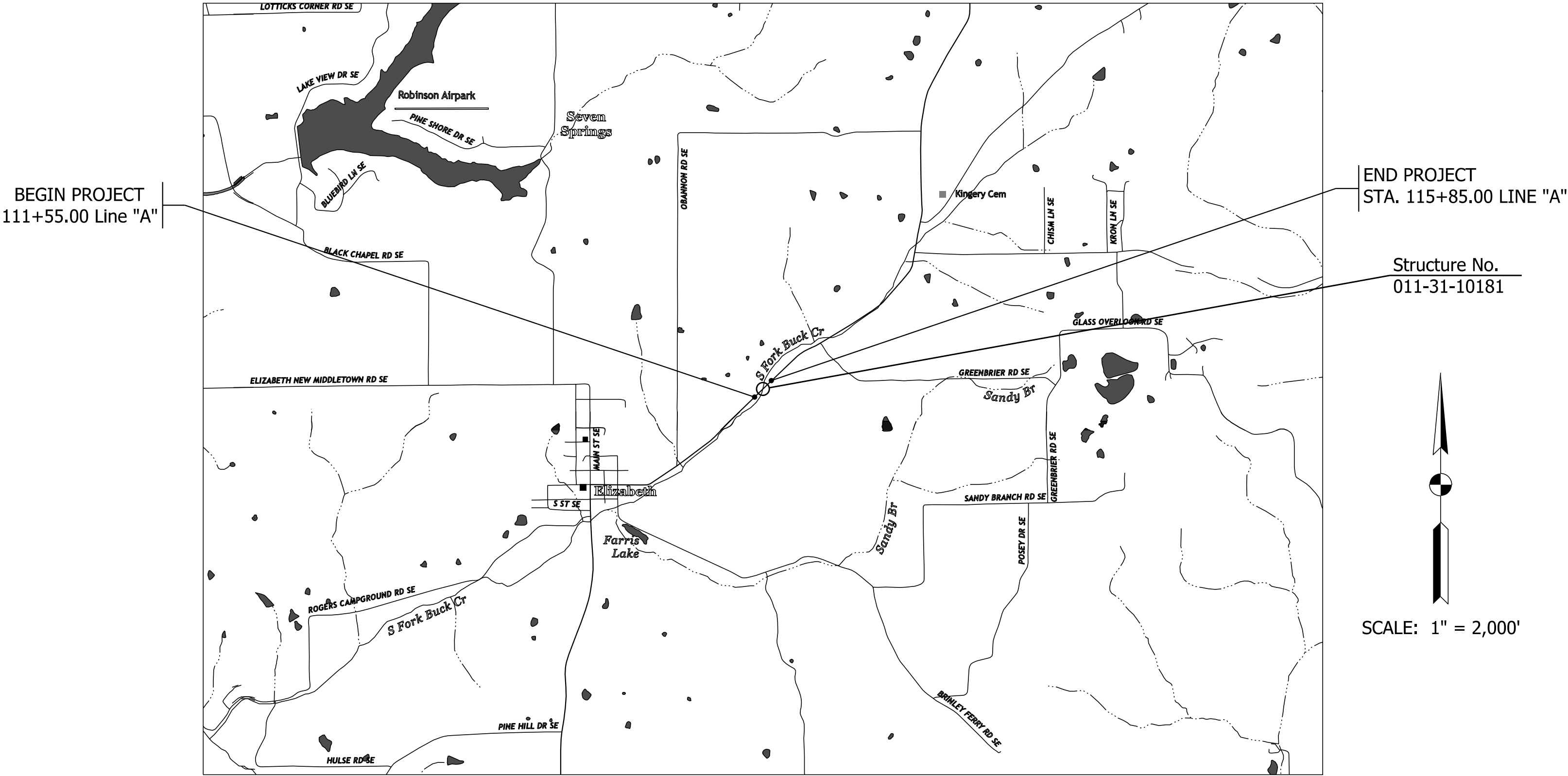
ROUTE: SR 11 AT: RP 19+42

PROJECT NO. 1600485 P.E

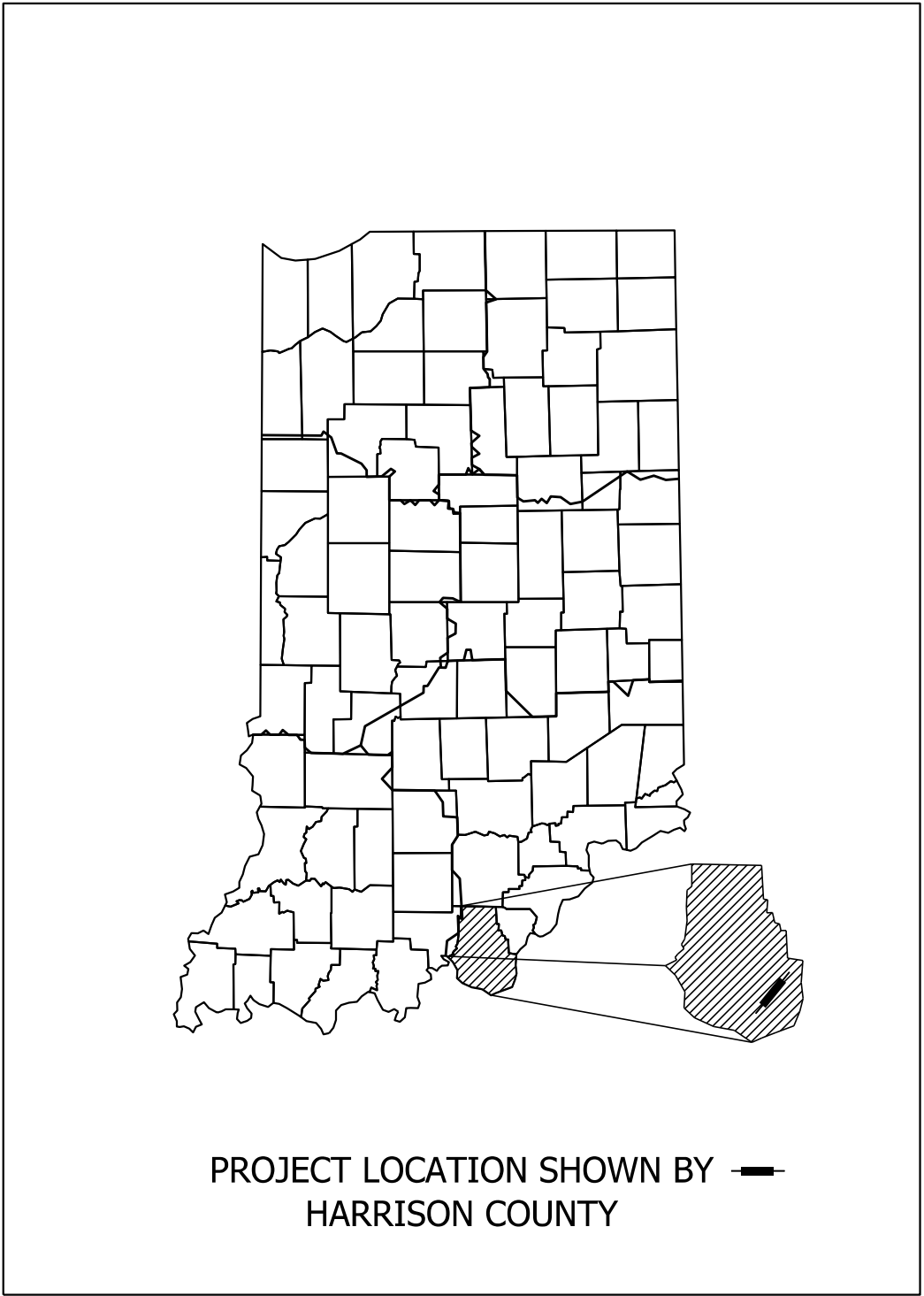
 1600485 R/W

 1600485 CONST.

Bridge Replacement on SR 11 over South Fork Buck Creek (South) located 0.85 miles southwest of SR 211 in Section 33, T-4-S, R-5-E, Posey Township, Harrison County, Indiana



TRAFFIC DATA		
A.A.D.T.	(2021)	3180 V.P.D.
A.A.D.T.	(2041)	3656 V.P.D.
D.H.V		366 V.P.H.
DIRECTIONAL DISTRIBUTION		50/50 %
TRUCKS		10 % A.A.D.T.
		10 % D.H.V.
DESIGN DATA		
DESIGN SPEED		50 M.P.H.
PROJECT DESIGN CRITERIA		3R (NON-FREEWAY)
FUNCTIONAL CLASSIFICATION		MAJOR COLLECTOR
RURAL/URBAN		RURAL
TERRAIN		ROLLING
ACCESS CONTROL		NONE



LATITUDE: 38° 07' 37" N	LONGITUDE: 85° 57' 40" W
BRIDGE LENGTH:	0.012 MI.
ROADWAY LENGTH:	0.109 MI.
TOTAL LENGTH:	0.121 MI.
MAX. GRADE:	3.06 %

HARRISON COUNTY

INDIANA DEPARTMENT OF TRANSPORTATION
STANDARD SPECIFICATIONS DATED 2020
TO BE USED WITH THESE PLANS

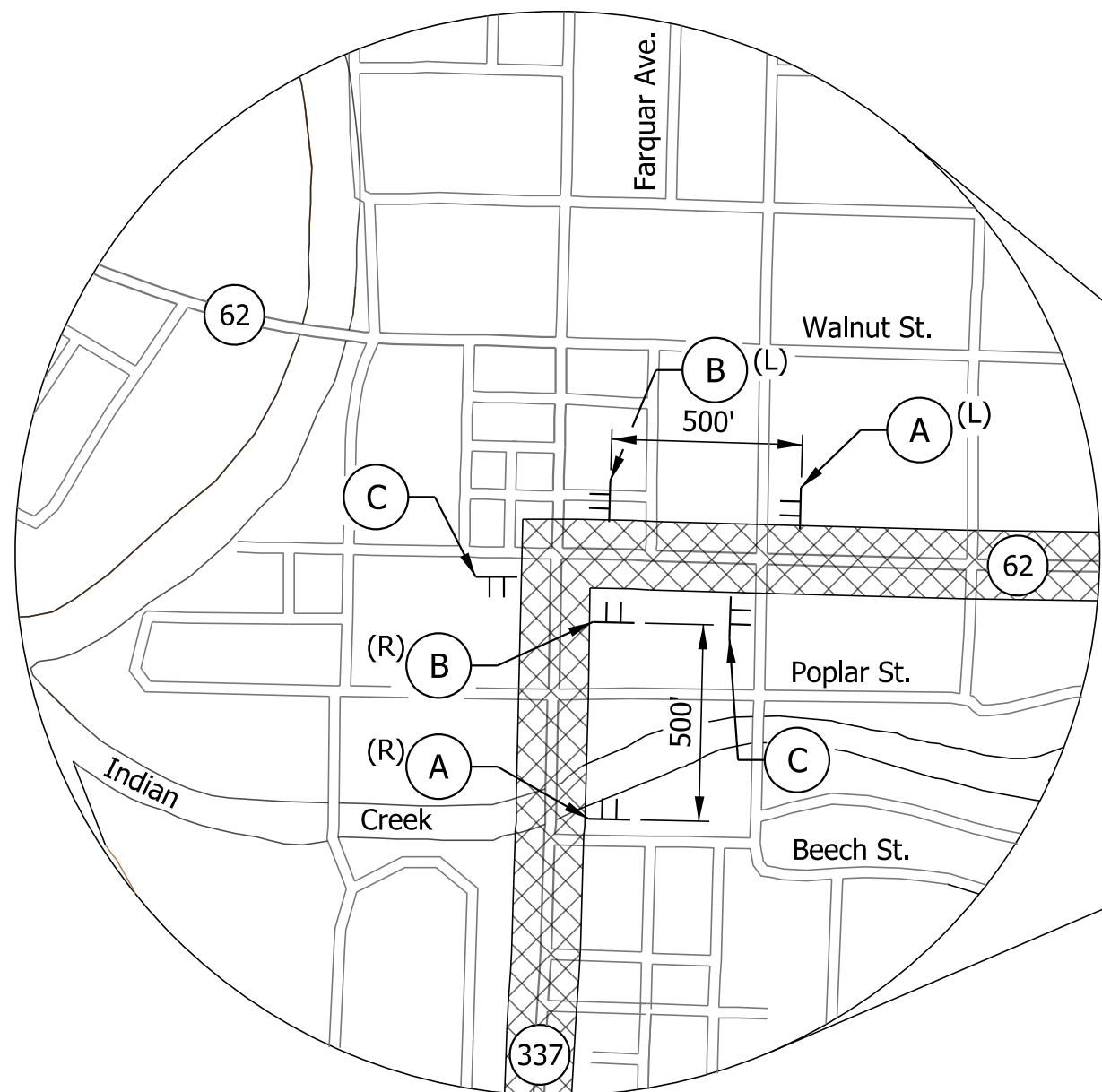
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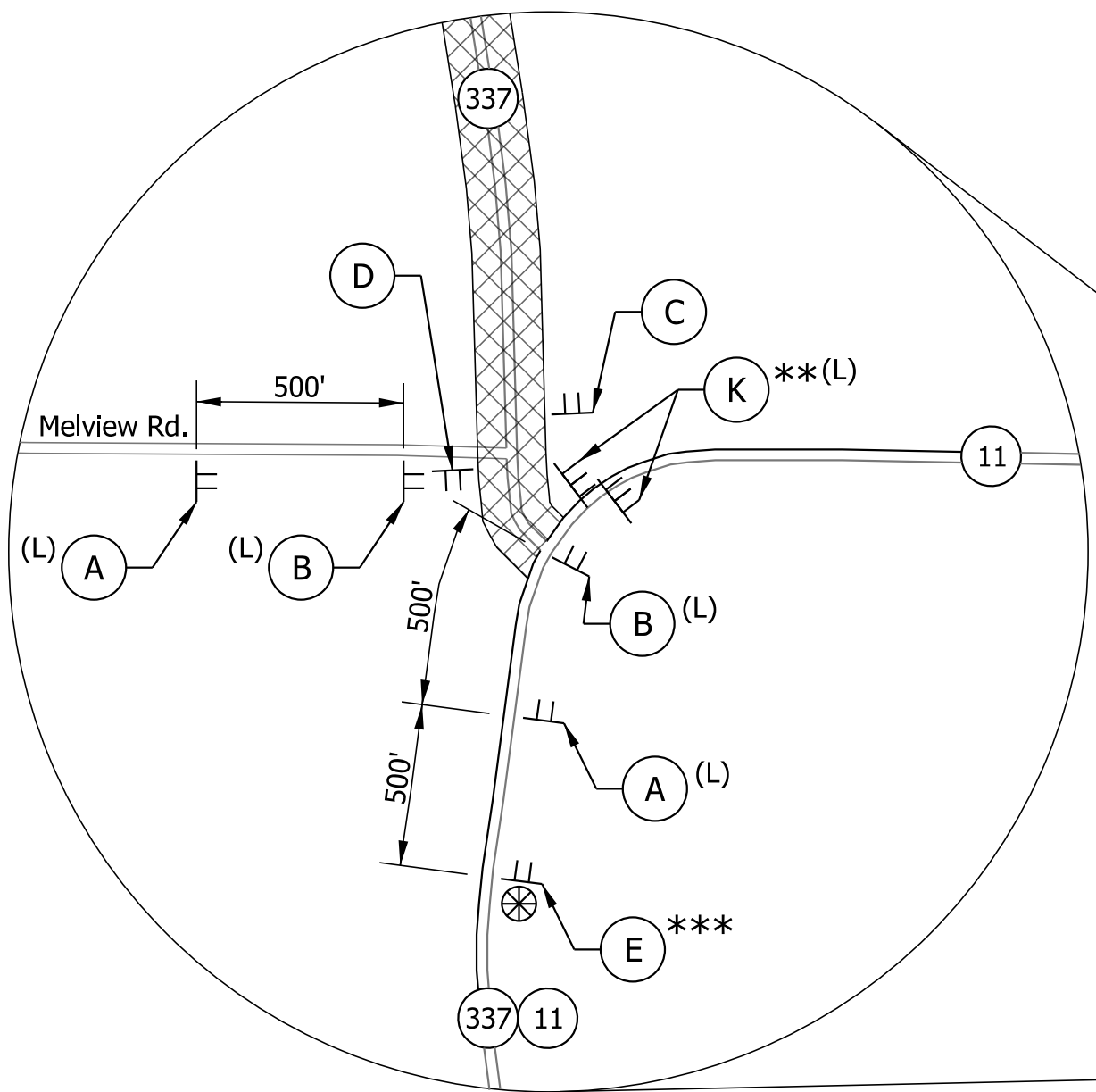
PLANS PREPARED BY:	GAI Consultants Inc.	(317) 436-9150 PHONE NUMBER
CERTIFIED BY:		DATE
APPROVED FOR LETTING:	INDIANA DEPARTMENT OF TRANSPORTATION	DATE

DRAWING NUMBER	BRIDGE FILE	
	011-31-10181	
	DESIGNATION	
CONTRACT	1600485	
	PROJECT	
	B-39896	
SHEETS		
1 of 22		

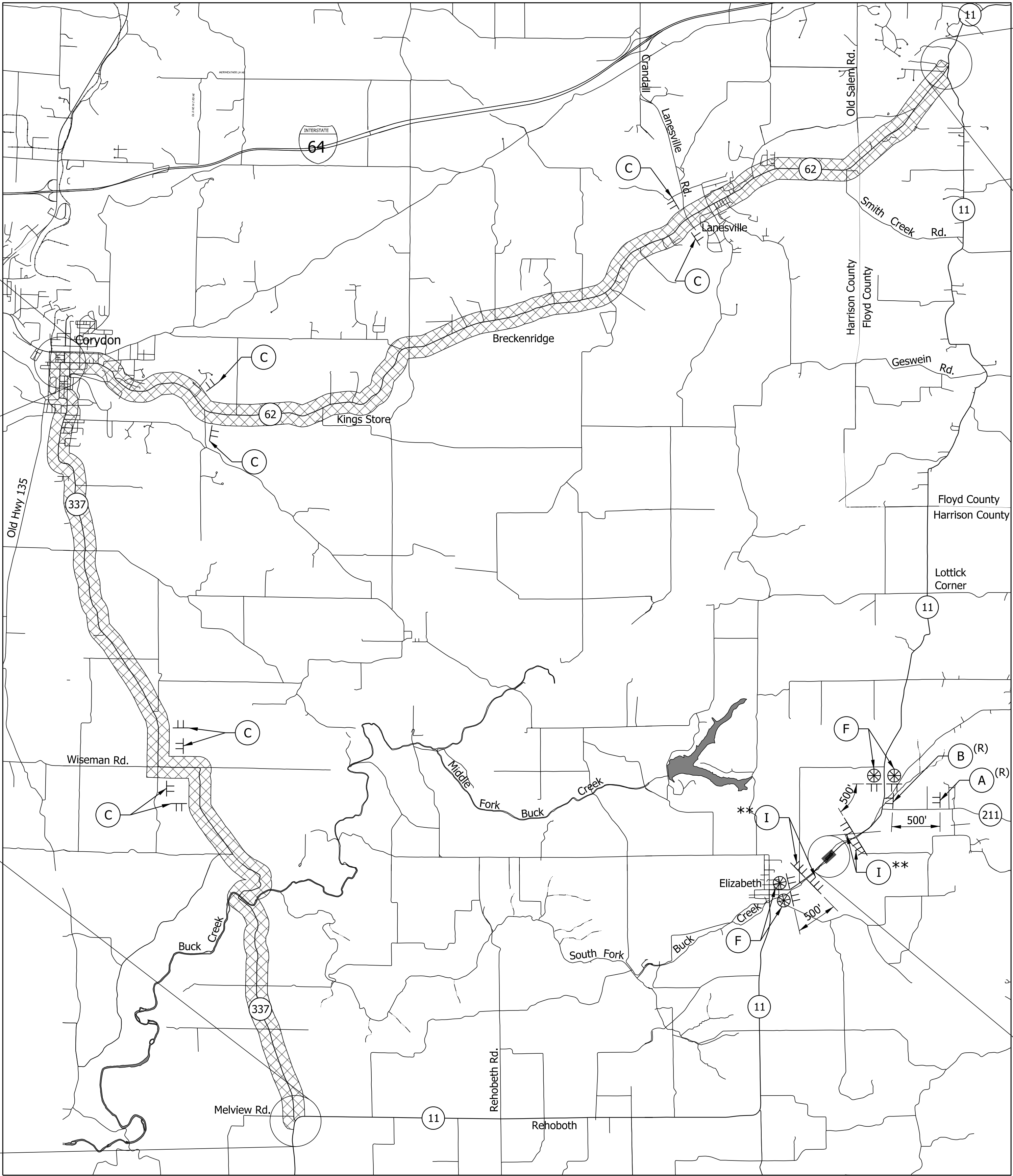
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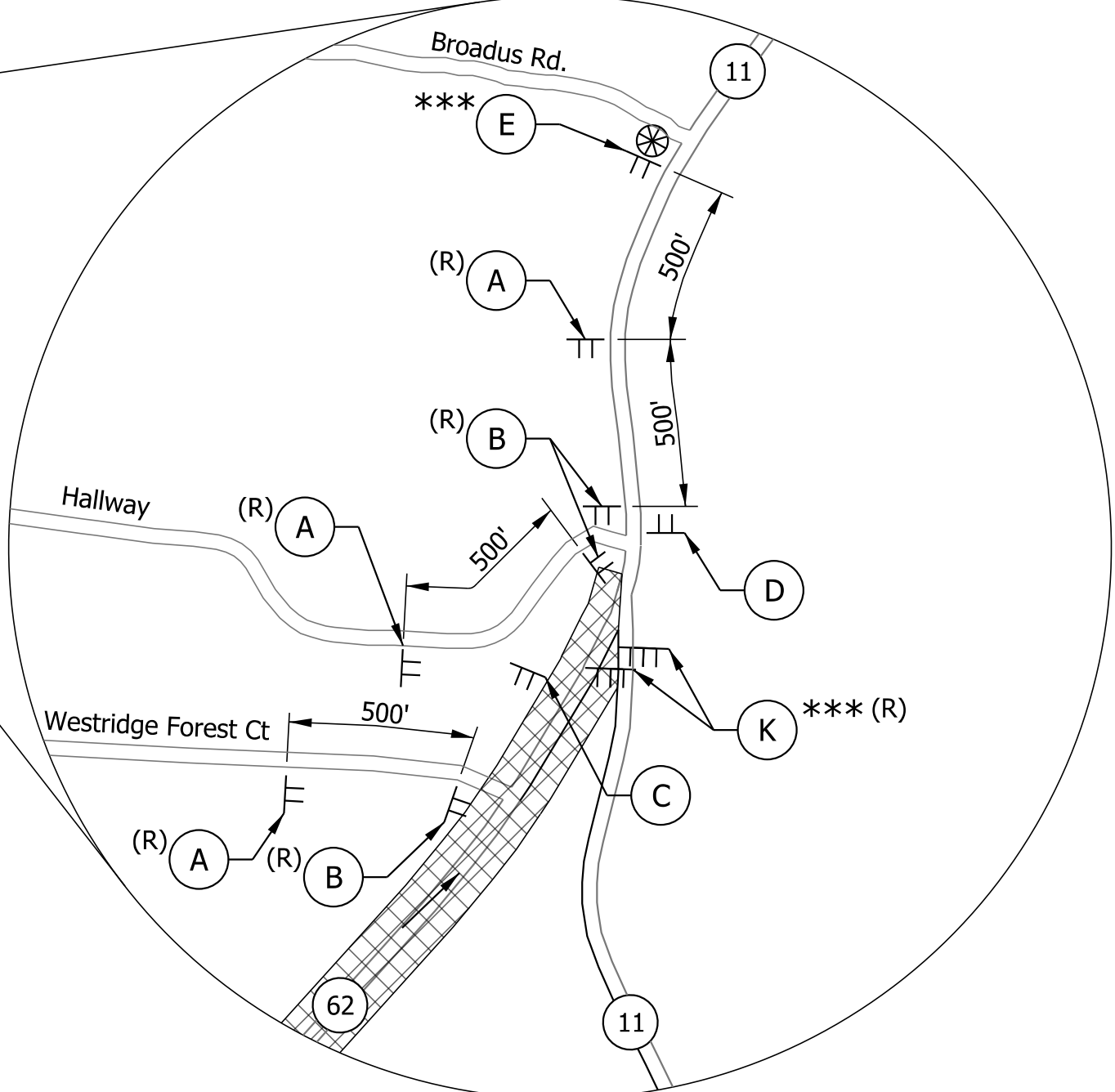
INTERSECTION OF SR 337 AND SR 62
Scale: 1"=500'



INTERSECTION OF SR 11 AND SR 337
Scale: 1"=500'



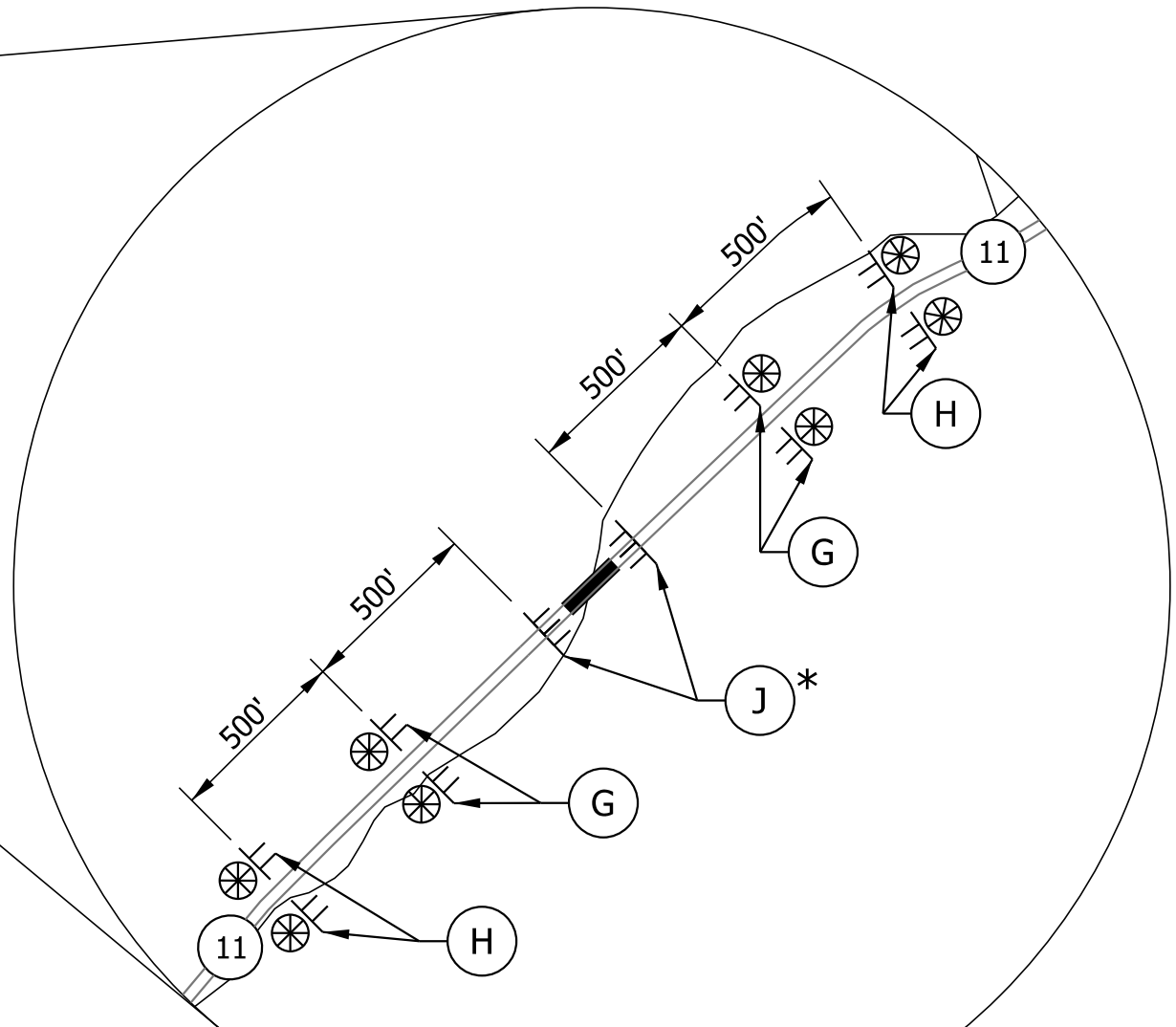
DETOUR PLAN
Scale: 1"=4000'



INTERSECTION OF SR 11 AND SR 62
Scale: 1"=500'

LEGEND

- Detour Route
- Construction Sign
- Low Intensity Construction Warning Light, Type A
- Type III-A Barricades
- Closure Area
- * With 24 Lft. of Type III-A Barricade
- ** With 8 Lft. of Type III-B Barricade
- *** With State Road (11) Sign (M1-5) Cardinal Direction (North, M3-2(N)) or (South, M3-4(S))



PROJECT WORKSITE
Scale: 1"=500'

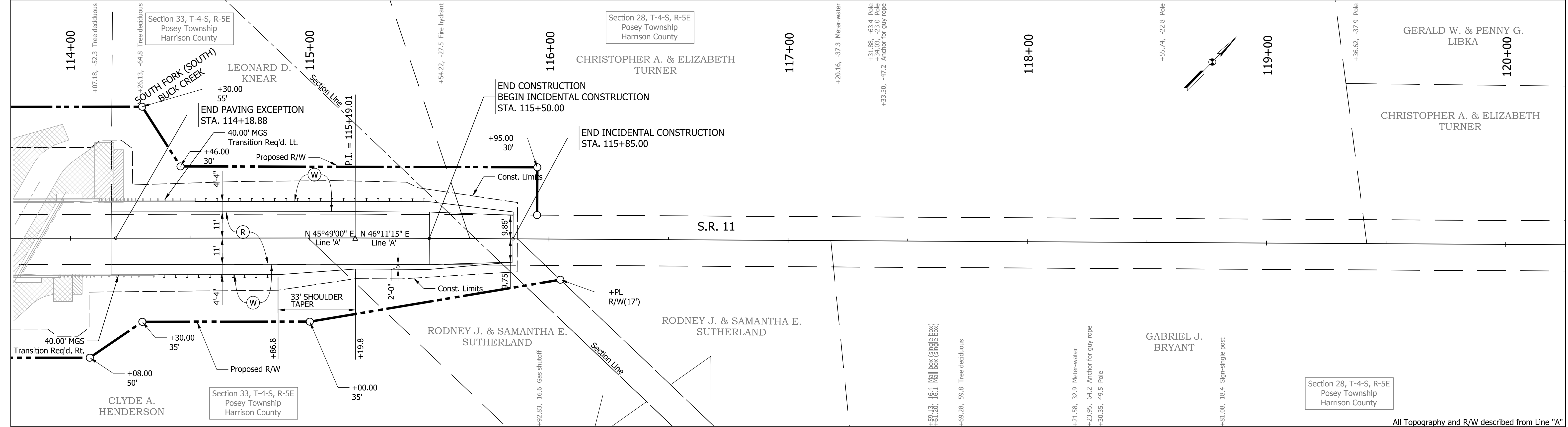


RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
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CHECKED: JAS	CHECKED: JAS	

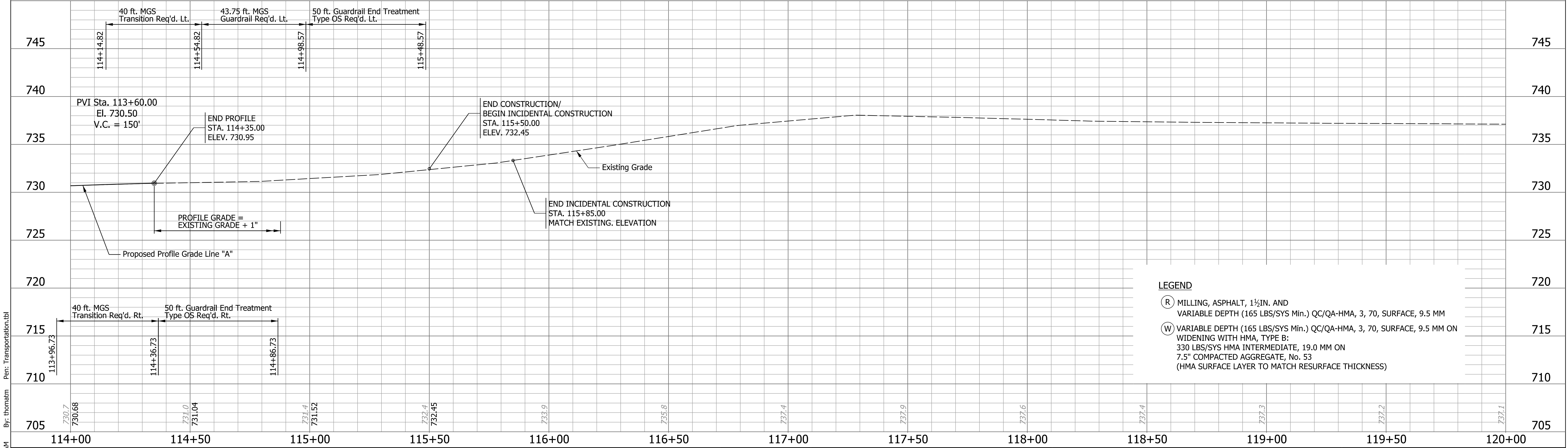
INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC

SCALE	BRIDGE FILE
AS NOTED	011-31-10181
	DESIGNATION
	1600485
DRAWING NUMBER	SHEETS
	4 of 22
CONTRACT	PROJECT
B-39896	1600485



750 750



RECOMMENDED FOR APPROVAL

DESIGN ENGINEER

DATE

DESIGNED: BWC

DRAWN: KTH

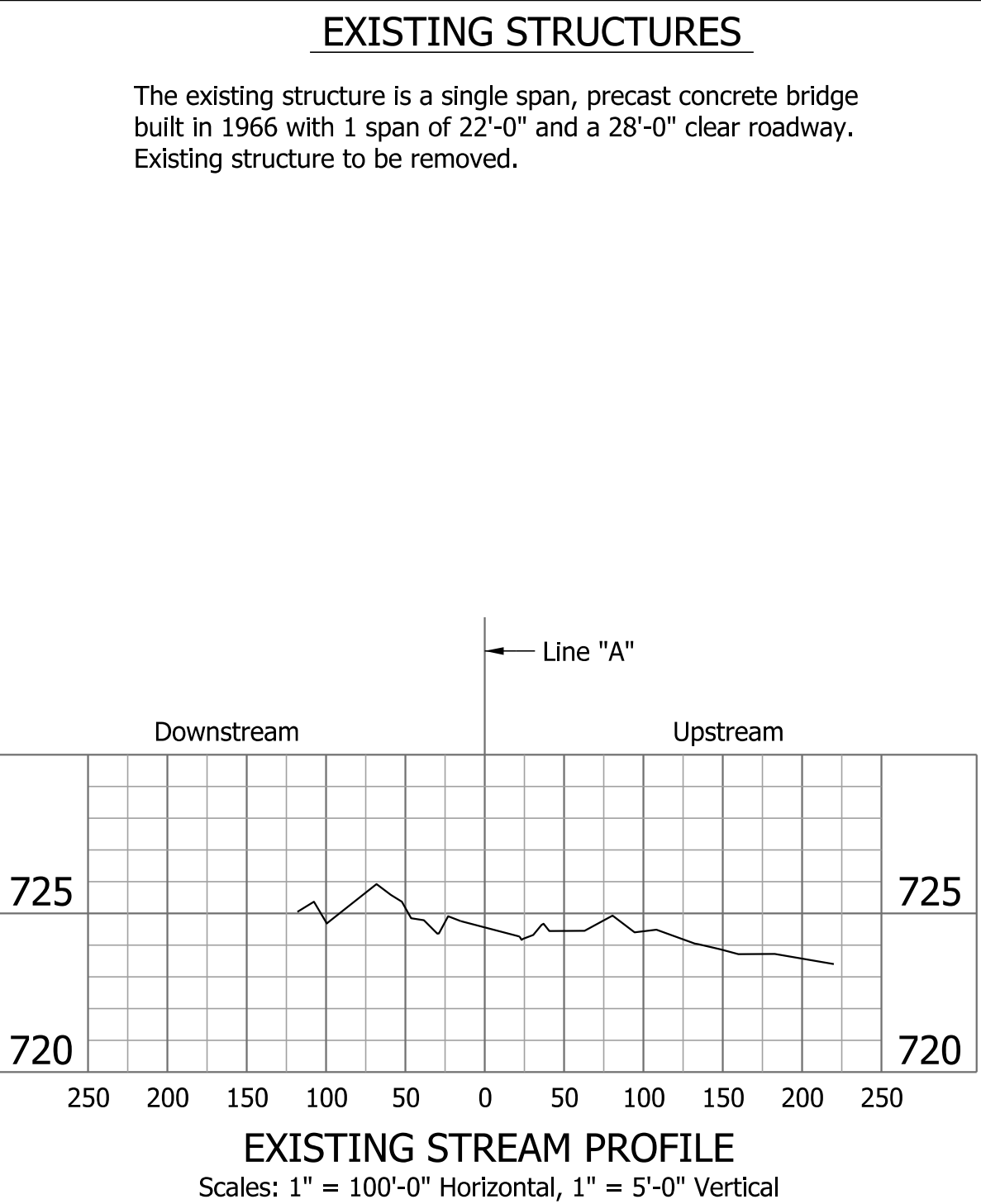
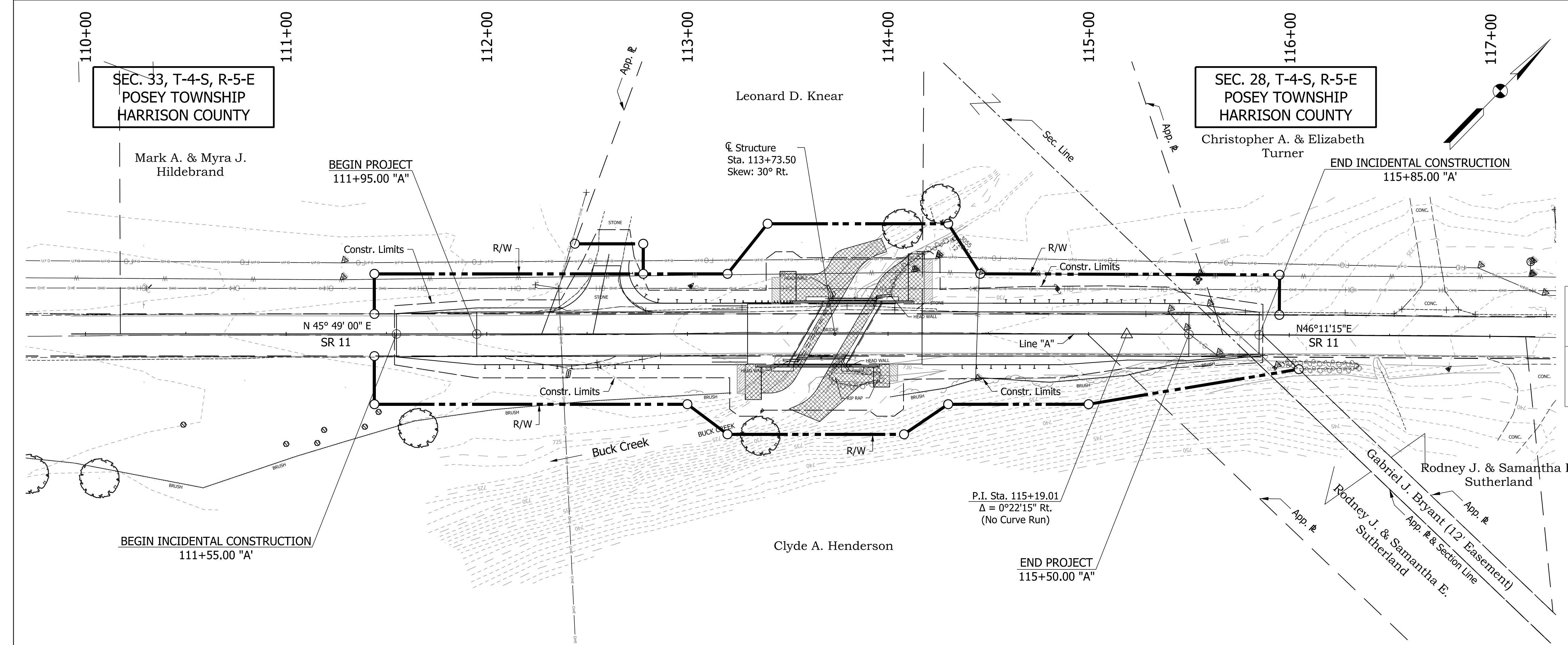
CHECKED: TAB

CHECKED: BWC

INDIANA DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE LINE "A"

SCALE	BRIDGE FILE
1" = 20'	011-31-10181
VERTICAL SCALE	DESIGNATION
1" = 5'	1600485
DRAWING NUMBER	SHEETS
of	7 of 22
CONTRACT	PROJECT
B-39896	1600485



HYDRAULIC DATA

Waterway Opening Required =	58.13 sq.ft.
Waterway Opening Provided =	63.69 sq.ft.
Existing Road Overflow Waterway Area =	113.00 sq.ft.
Drainage Area =	1.59 sq.mi.
Design Discharge =	1400 cfs
Velocity Existing=	5.53 ft/s
Velocity Proposed=	5.32 ft/s
Q100 Elevation =	729.53 ft.
Existing Backwater at Q100 =	0.60 ft.
Proposed Backwater at Q100 =	0.60 ft.
Existing Q100 Headwater Elevation =	730.24 ft.
Proposed Q100 Headwater Elevation =	730.34 ft.
Existing Low Structure Elevation =	728.28 ft.
Proposed Low Structure Elevation =	728.28 ft.

HYDRAULIC SCOUR DATA

Q100 Discharge =	1400 cfs
Q100 Elevation =	729.53 ft.
Maximum Velocity at Q100 =	6.92 ft/sec
Scour Depth (Contraction) =	3.04 ft.
Scour Depth (Total) =	3.04 ft.
Low Scour Elevation =	721.16 ft.
Q500 Discharge =	1960 cfs
Q500 Elevation =	729.97 ft.
Maximum Velocity at Q500 =	7.34 ft/sec
Scour Depth (Contraction) =	3.24 ft.
Scour Depth (Total) =	3.24 ft.
Low Scour Elevation =	720.96 ft.

NOTES:

All R/W on this sheet is described from Line "A".

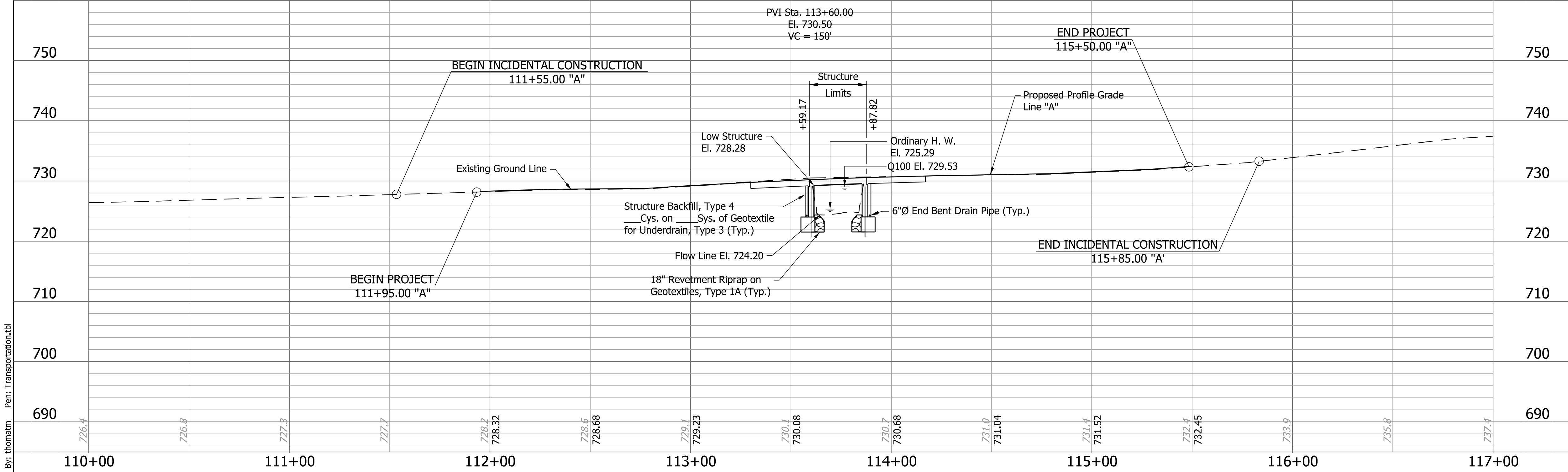
For guardrail limits and side ditch grades, see Road Plan and Profile Sheet.

For alignment references, benchmarks and topo references, see Index.

Cross-Hatched areas indicate limits of 18" Revetment Riprap over Geotextiles. (Est. Qty. = * Tons of 18" Revetment Riprap over * Sys. of Geotextiles)

Hatched areas indicate limits of 4' wide sodding strip. (Est. Qty. = * Sys.)

REINFORCED CONCRETE SLAB BRIDGE
SR 11 OVER SOUTH FORK BUCK CREEK
1 SPAN: 26'-11" SKEW: 30° RT. CLEAR ROADWAY: 30'-0"
HARRISON COUNTY



Plot: 2/26/2020 8:13:22 AM By: thomasm Pen: Transportation.tbl

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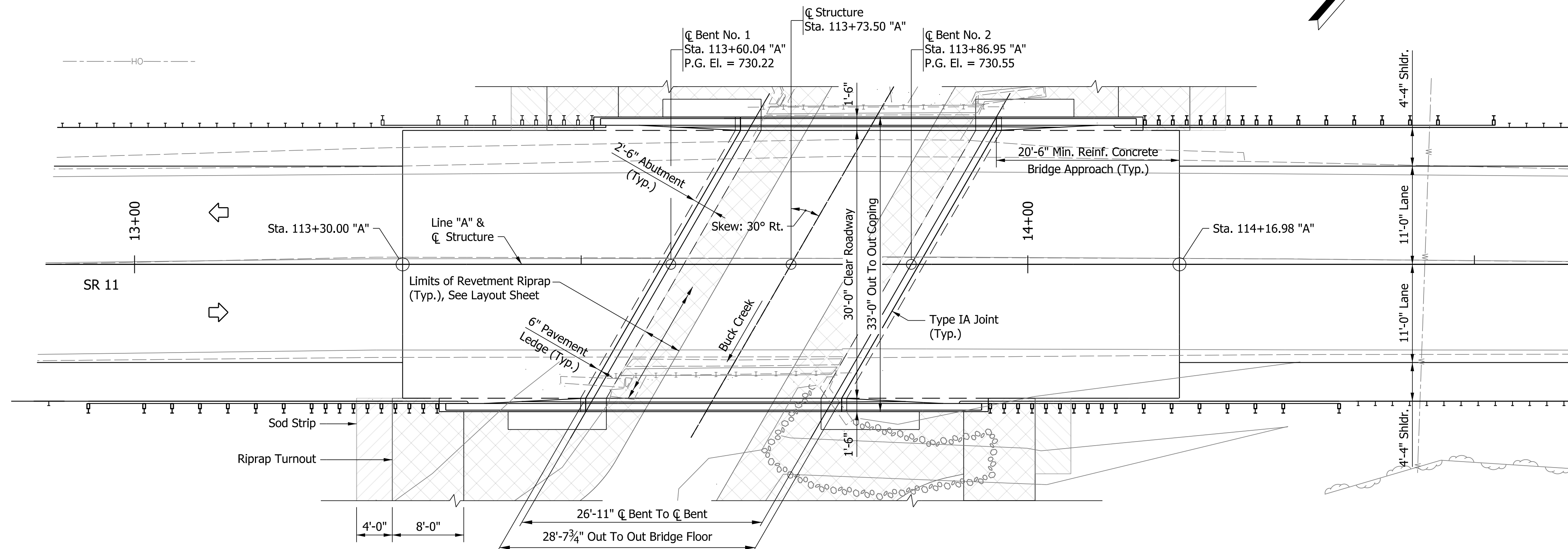
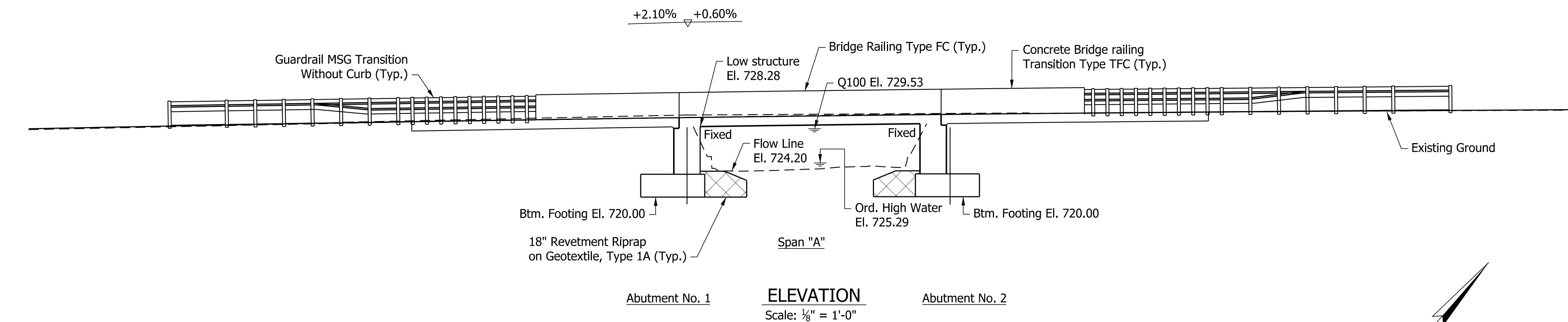


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DESIGNED: NRT	DRAWN: TMT
CHECKED: TDJ	CHECKED: KMP

INDIANA DEPARTMENT OF TRANSPORTATION	
LAYOUT	

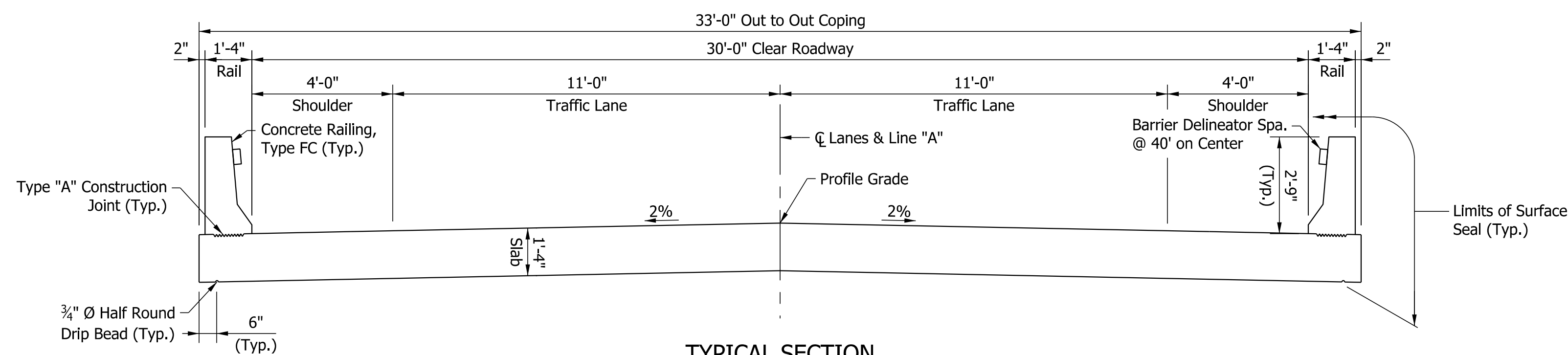
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DRAWING NUMBER	SHEETS 9 of 22
CONTRACT B-39896	PROJECT 1600485

STRUCTURE TO BE BUILT ON A 150' VERTICAL CURVE



PLAN

Scale: $\frac{1}{8}" = 1'-0"$



TYPICAL SECTION

Scale: $\frac{3}{8}" = 1'-0"$

GENERAL NOTES

Reinforcing steel cover shall be 2 1/2" in top and 1" minimum in bottom of floor slab, 3" in footings, except bottom steel which shall be 4", and 2" in all other parts, unless noted.

DESIGN DATA

Superstructure and Substructure designed for HL-93 loading in accordance with AASHTO LRFD Bridge Design Specifications for Highway Bridges 8th Edition, 2019 and its subsequent interims .

DEAD LOAD

Actual weight plus 35 psf (composite) for future wearing surface and 15 (non-composite) for permanent metal deck forms.

FLOOR SLAB

Designed with a 7 1/2" structural depth plus a 1/2" sacrificial wearing surface.

DESIGN STRESSES

CONCRETE

Class "A" Concrete: $f'_c = 3,500$ psi
Class "B" Concrete: $f'_c = 3,000$ psi
Class "C" Concrete: $f'_c = 4,000$ psi

REINFORCING STEEL

Grade 60 $F_y = 60,000 \text{ psi}$

CONSTRUCTION LOADING

The exterior beam has been checked for strength, deflection, and overturning using the construction loads shown below. Cantilever overhang brackets were assumed for support of the deck overhang past the edge of the exterior beam. Finishing machine was assumed to be supported 6 in. outside the vertical coping form. The top overhang brackets were assumed to be located 6 in. past the edge of the vertical coping form. The bottom of overhang brackets were assumed to be braced against the intersection of the girder bottom flange and web.

DECK FALSEWORK LOADS

Designed for 15 lb/ft² for permanent metal stay-in-place deck forms, removable deck forms, and 2-ft exterior walkways.

CONSTRUCTION LIVE LOAD

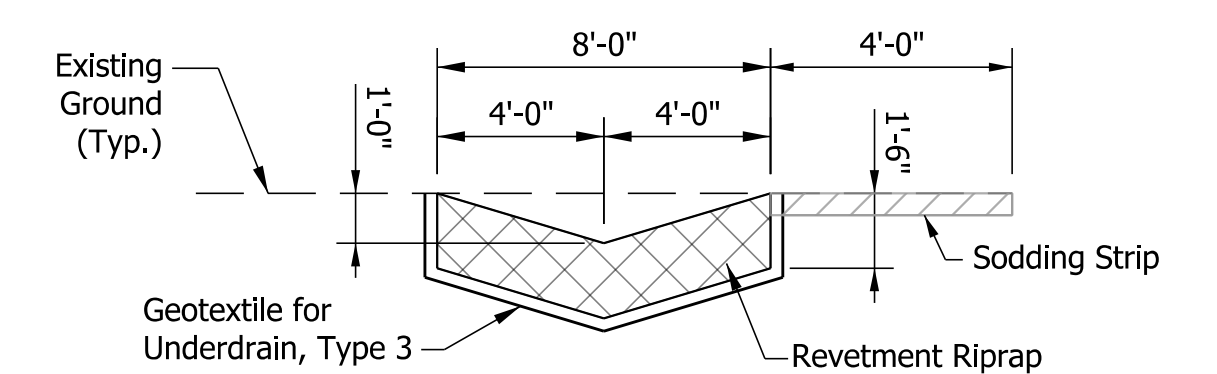
Designed for 20 lb/ft² extending 2 ft past the edge of coping and 75 lb/ft vertical force applied at a distance of 6 in. outside the face of coping over a 30-ft length of the deck centered with the finishing machine.

FINISHING MACHINE LOAD

4500 lb distributed over 10 ft along the coping.

WIND LOAD

Designed for 70 mph horizontal wind loading in accordance with LRFD 3.8.1.



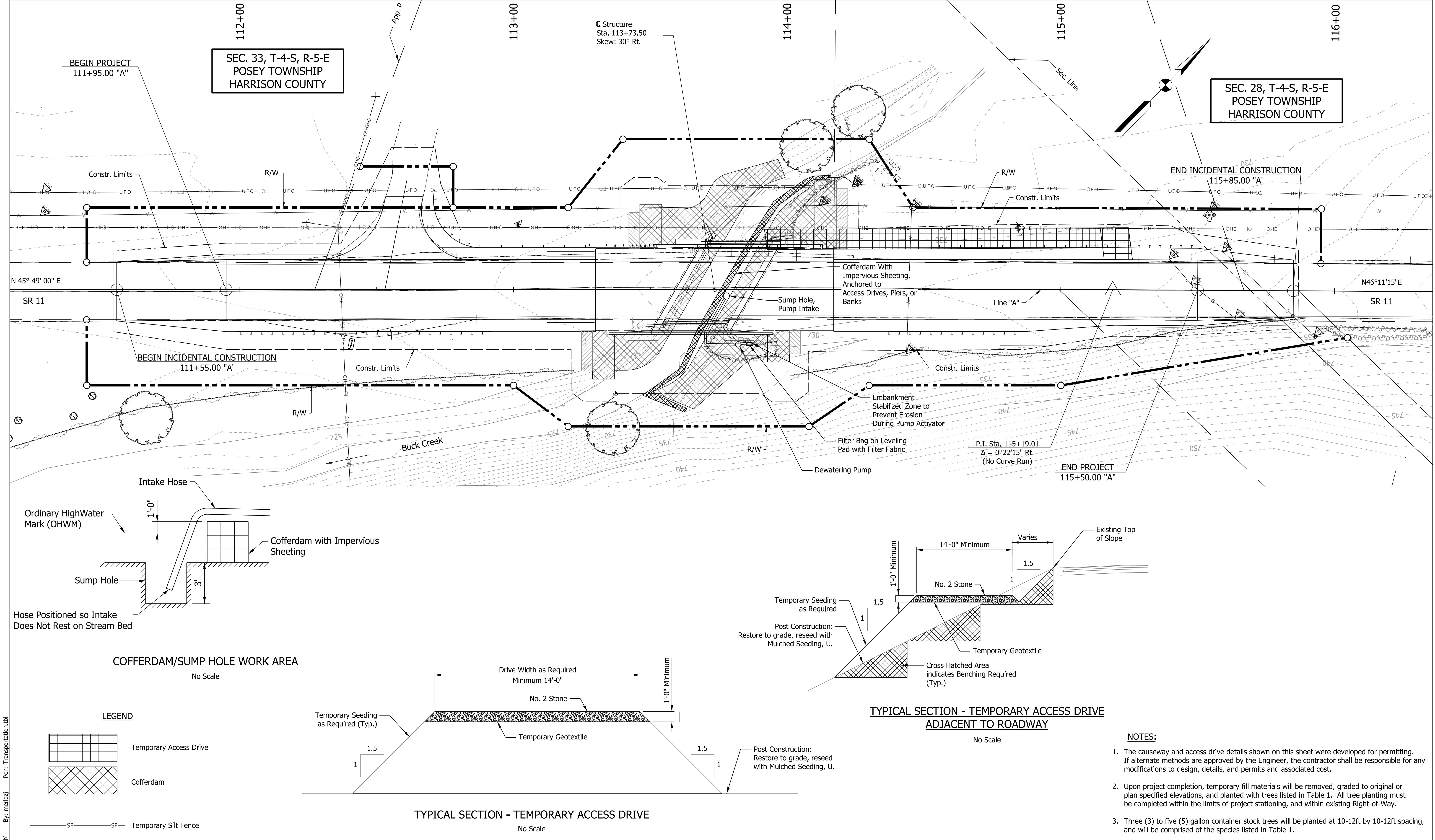
RIPRAP TURNOUT TYPICAL SECTION

No Scale

REINFORCED CONCRETE SLAB BRIDGE

SR 11 OVER SOUTH FORK BUCK CREEK
1 SPAN: 26'-11" SKEW: 30° RT. CLEAR ROADWAY: 30'-0"
HARRISON COUNTY

RECOMMENDED FOR APPROVAL _____ <div>DESIGN ENGINEER _____ DATE _____</div>	INDIANA DEPARTMENT OF TRANSPORTATION			SCALE		BRIDGE FILE		
				1" = 30'-0"		011-31-10181		
				VERTICAL CURVE		DESIGNATION		
				1" = 10'-0"		1600485		
DESIGNED: <u>NRT</u>	DRAWN: <u>TMT</u>	GENERAL PLAN			DRAWING NUMBER		SHEETS	
						10	of	22
CHECKED: <u>TDJ</u>	CHECKED: <u>NRT</u>				CONTRACT		PROJECT	
					B-39896		1600485	



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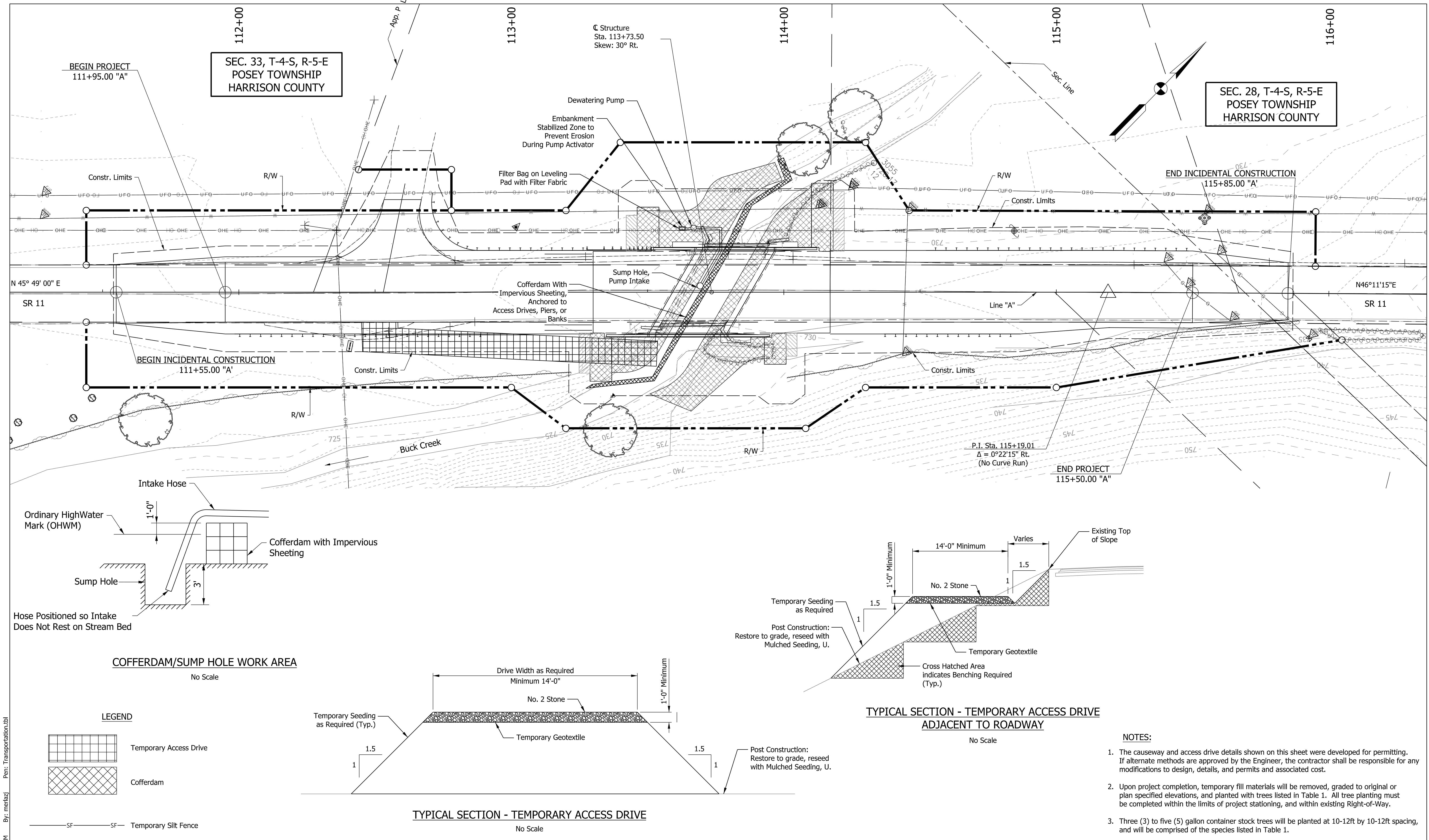


RECOMMENDED FOR APPROVAL	
DESIGN ENGINEER	DATE
DESIGNED:	DRAWN: ZJM
CHECKED:	CHECKED: KMP

INDIANA
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL
PHASE 1

SCALE 1/16" = 1'-0"	BRIDGE FILE 011-31-10181
	DESIGNATION 1600485
DRAWING NUMBER	SHEETS
	11 of 24
CONTRACT B-39896	PROJECT 1600485



Plot: 3/4/2020 2:11:10 PM By: mchazj Pen: Transportation.tbl

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						1/16" = 1'-0"		011-31-10181						
								DESIGNATION						
								1600485						
<div>DESIGNED:</div>			<div>DRAWN: ZJM</div>			<div>EROSION CONTROL</div> <div>PHASE 2</div>			DRAWING NUMBER		SHEETS			
									12		of		24	
<div>CHECKED:</div>			<div>CHECKED: KMP</div>						CONTRACT		PROJECT			
									B-39896		1600485			

Appendix C

Early Coordination

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Early Coordination Example Letter	C1 to C2
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Notice of Survey Example Letter	C4 to C5
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Response – IDEM Wellhead	C10
Response – Indiana Geological Survey	C11 to C13
Response – NRCS	C14
Response – INDOT Aviation	C15
Response – IDNR	C16 to C19
Response – USFWS	C20 to C21
Response – Harrison County Highway Dept.	C22
USFWS Official Species List (IPaC)	C23 to C29
INDOT Bat Database Email Correspondence	C30 to C31
USFWS Concurrence Verification Letter	C32 to C45
INDOT Concurrence Email for NLAA	C47
USFWS Gray Bat NLAA Determination	C48 to C51
USFWS Bridge/Structure Assessment Form	C52 to C53



October 4, 2017

GAI Project No. D170118.05

Sample Early Coordination Letter

**Early Coordination
Designation No. 1600485
SR 11 over South Fork Buck Creek
Bridge Replacement Project
Harrison County, Indiana**

Dear Interested Agency:

The Indiana Department of Transportation (INDOT) is proposing to replace the structure carrying State Road (SR) 11 over South Fork Buck Creek (Bridge No. 011-31-06119), located in Harrison County, Indiana. This letter is part of the early coordination phase of the environmental review process. We are requesting comments from your area of expertise regarding any possible environmental effects associated with this project. **Please use the above designation number and description in your reply.** We will incorporate your comments into a study of the project's environmental impacts.

This project is located at the SR 11 Bridge over South Fork Buck Creek, approximately 0.85 mile south of SR 211, specifically located in Section 33 of Township 4 South, Range 5 East as shown on the Lanesville USGS 7.5 Minute Topographic Map. The existing structure is a 24 ft. single-span bridge constructed in 1966. SR 11 is functionally classified as a major collector, consisting of two 10 ft. travel lanes with 1-2 ft. shoulders at the project location. Apparent existing right-of-way extends approximately 30 ft. on either side of the centerline (60 ft. total). The proposed project involves replacing and widening the bridge superstructure to accommodate a deck with two 12 ft. travel lanes and 8 ft. shoulders and replacing components of the substructure. Scour protecting is likely to be required at the abutments.

A Red Flag Investigation is currently being performed to determine items of concern within the project area. Land use in the vicinity is primarily rural residential and agricultural fields. A Wetland Delineation/Determination and Waters of the United States investigation will be conducted in accordance with the 1987 United States Army Corps of Engineers (USACE) *Corps of Engineers Wetlands Delineation Manual* (1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains Piedmont Region* (Version 2.0, USACE, 2010) and coordinated with the INDOT Ecology & Permits Office. The Range-Wide Programmatic Informal Consultation process is anticipated for this project to evaluate potential impacts to the Indiana Bat and the Northern Long-Eared Bat, which will involve coordination with the USFWS for review.

As the Section 106 process advances, the project area will be surveyed by individuals satisfying the *Secretary of the Interior Professional Qualification Standards* to determine an area of potential effect (APE), make recommendations on eligibility determinations and assess effects on potential historic resources. Additionally, the project area will be subjected to an archaeological reconnaissance by a qualified archaeologist. Coordination with the State Historic Preservation Officer (SHPO) and the identified consulting parties will be ongoing for the duration of the Section 106 process.

Should we not receive your response **within thirty (30) calendar days** from the date of this letter, it will be assumed that your agency or organization feels that there will be no adverse effects incurred as a result of the proposed project. However, should you find that an extension to the response time is necessary; a reasonable extension may be granted upon request.

Project location maps and photo documentation are attached. If you have any questions regarding this matter, please contact me at p.killian@gaiconsultants.com or (317) 436-4844.

Sincerely,

GAI Consultants, Inc.



Paul Killian
Project Environmental Specialist

Enc.: Project Location Maps, Photo Documentation

SR 11 over South Fork Buck Creek
Bridge Replacement Project
Des. No. 1600485

Agencies Receiving Early Coordination Packet:

Distributed on October 4, 2017

Mr. Scott Pruitt, Field Supervisor
U.S. Fish and Wildlife Service
Northern Indiana Suboffice
P.O. Box 2616
Chesterton, IN 46304
Attn: Ms. Elizabeth McCloskey
Elizabeth_McCloskey@fws.gov

Mr. Rick Neilson, State Conservationist
Natural Resources Conservation Service
6013 Lakeside Boulevard
Indianapolis, IN 46278
Rick.neilson@in.usda.gov

Ms. Nancy Hasenmueller, Section Head
Indiana Geological Survey, Environmental Geology
611 North Walnut Grove
Bloomington, IN 47405
IGSenvir@indiana.edu

Mr. Adam French, Development Specialist
IN Dept. of Transportation, Aviation Division
100 North Senate Avenue, Rm N955, IGCN
Indianapolis, IN 46204
afrench2@indot.in.gov

Regional Environmental Coordinator
National Park Service, Midwest Regional Office
601 Riverfront Drive
Omaha, NE 68102

Mr. Antonio Johnson
Planning & Environmental Specialist
Federal Highway Administration, Indiana Division
Federal Office Building, Room 254
575 North Pennsylvania Street,
Indianapolis, IN 46204
Antonio.Johnson@dot.gov

Ms. Christie Stanifer, Environmental Coordinator
IN Dept. of Natural Resources
Division of Water, Fish & Wildlife Unit
402 West Washington Street, Rm W273, IGCS
Indianapolis, IN 46204
environmentalreview@dnr.in.gov

Field Environmental Officer
U.S. Dept. of Housing & Urban Development
Chicago Regional Office, Metcalf Fed. Bldg.
77 West Jackson Boulevard, Room 2401
Chicago, IL 60604

Mr. Rickie Clark, Public Involvement Manager
IN Dept. of Transportation
Office of Public Involvement
100 N. Senate Ave., Room N642
Indianapolis, IN 46204
rclark@indot.in.gov

Mr. Doug Shelton, Chief, Environmental Resources
Department of the Army, Corps of Engineers
Louisville District
P.O. Box 59
Louisville, KY 40201
Attn: CEMP-P-E

Mr. Thomas Easterly, Commissioner
IN Dept. of Environmental Management
Office of Planning and Assessment
(Website Submittal)

Wellhead Proximity Determinator
(Website Investigation)

Mr. Travis Mankin, Project Manager
IN Dept. of Transportation, Seymour District
185 Agrico Lane
Seymour, IN 47274
tmankin@indot.in.gov

Mr. David Dye, Environmental Scoping Manager
IN Dept. of Transportation, Seymour District
185 Agrico Lane
Seymour, IN 47274
ddye@indot.in.gov

Mr. Kevin Russel, Highway Director
Harrison County Highway Department
1359 Old HWY 135 SW
Corydon, IN 47112
k.russel@harrisoncounty.in.gov

Mr. Harold Klintiver, Harrison County Surveyor
245 Atwood Street NE, Suite #219
Corydon, IN 47112
countysurveyor@harrisoncounty.in.gov



August 25, 2017
Project D170118.05

Sample Notice of Survey Letter

**Des No. 1600485, Bridge #6119 SR 11 @ S. Fork Buck Creek,
Bridge Improvements, Harrison County, Indiana
Location Address: North Highway 11 Southeast, Elizabeth, Indiana 47117**

Notice of Entry for Survey Beginning August 29, 2017

Dear Owner or Current Occupant:

Our information indicates that you own or occupy property at 5365 North Highway 11 Southeast, Elizabeth, Indiana 47117 located near the above proposed transportation project. As representatives of the Indiana Department of Transportation (INDOT), GAI Consultants, Inc. or other consultants will be conducting field and environmental surveys in the future. It may be necessary for them to enter onto your property to complete this work. This is permitted under Indiana Code § 8-23-7-26. Anyone performing this type of work has been instructed to identify him or herself to you, if you are available, before they enter your property. If you no longer own this property or it is currently occupied by someone else, please provide us the name of the new owner or occupant and their contact information so that we can contact them about the survey.

Please read the attached notice to inform you of what the "Notice of Entry for Survey or Investigation" means. The field survey(s) may include but is/are not limited to topographic survey including the mapping of locations of features such as trees, buildings, fences and drives, and obtaining ground elevations and geotechnical investigation. The environmental survey(s) may include but is/are not limited to archaeological investigations (which may involve the survey, testing, or excavation of identified archaeological sites), identification and mapping of wetlands and waterways, taking photographs of the area (which may include infrastructure, roads, residential properties, and commercial properties), a historical review of the properties within the vicinity of the proposed project area, evaluation of land use for completion of environmental documentation and various other environmental studies. The information we obtain from such surveys and studies is necessary for the proper planning and design of this project.

It is our sincere desire to cause you as little inconvenience as possible during these surveys. If any problems do occur, please contact Mark Young at m.young@gaiconsultants.com or (317) 436-4821. However, please keep in mind that ***no specific information regarding this project is available at this time.*** Thank you in advance for your cooperation.

Sincerely,

GAI Consultants, Inc.

Mark D. Young, PE
Project Manager

MDY/kam

Enc.: Indiana Department of Transportation Notice of Entry for Survey or Investigation

Indiana Department of Transportation Notice of Entry for Survey or Investigation

If you have received a “Notice of Entry for Survey or Investigation” from INDOT or an INDOT representative, you may be wondering what it means. In the early stages of a project’s development, INDOT must collect as much information as possible to ensure that sound decisions are made in designing the proposed project. Before entering onto private property to collect that data, INDOT is required to notify landowners that personnel will be in the area and may need to enter onto their property. Indiana Code, Title 8, Article 23, Chapter 7, Section 26 deals with the department’s authority to enter onto any property within Indiana.

Receipt of a Notice of Entry for Survey or Investigation does not necessarily mean that INDOT will be buying property from you. It doesn’t even necessarily mean that the project will involve your property at all. Since the Notice of Entry for Survey or Investigation is sent out in the very early stages and since we want to collect data within AND surrounding the project’s limits more landowners are contacted than will actually fall within the eventual project limits. It may also be that your property falls within the project limit, but we will not need to purchase property from you to make improvements to the roadway. Another thing to keep in mind is that when you receive a Notice of Entry for Survey or Investigation, very few specifics have been worked out and actual construction of the project may be several years in the future.

Before INDOT begins a project that requires them to purchase property from landowners, they must first offer the opportunity for a public hearing. If you were on the list of people who received a Notice of Entry for Survey or Investigation, you should also receive a notice informing you of your opportunity to request a public hearing. These notices will also be published in your local newspaper so interested individuals who are not adjacent to the project will also have the opportunity to request a public hearing. If a public hearing is to be held, INDOT will publicize the date, location, and time. INDOT will present detailed project information at the public hearing, comments will be taken from the public in spoken and written form, and question and answer sessions will be offered. Based on the feedback INDOT receives from the public, a project can be modified and improved to better serve the public.

So, if you received a “Notice of Entry for Survey or Investigation”, remember:

1. You do not need to take any action at this time. It is merely letting you know that people in orange/lime vests are going to be in your neighborhood.
2. The project is still in its very early planning stages.
3. You will be notified of your opportunity to comment on the project at a later date.



Indiana Department of Environmental Management

We Protect Hoosiers and Our Environment.

100 North Senate Avenue - Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Indiana Department of Transportation
Travis Mankin
185 Agricola Lane
Seymour, IN 47274
Date

GAI Consultants, Inc.
Paul Killian
6420 Castleway West Drive
Indianapolis, IN 46250

Dear Grant Administrator or Other Finance Approval Authority:

RE: The Indiana Department of Transportation (INDOT) is proposing to replace the structure carrying State Road (SR) 11 over South Fork Buck Creek (Bridge No. 011-31-06119), located in Harrison County, Indiana. This project is located at the SR 11 Bridge over South Fork Buck Creek, approximately 0.85 mile south of SR 211, specifically located in Section 33 of Township 4 South, Range 5 East as shown on the Lanesville USGS 7.5 Minute Topographic Map. The existing structure is a 24 ft. single-span bridge constructed in 1966. SR 11 is functionally classified as a major collector, consisting of two 10 ft. travel lanes with 1-2 ft. shoulders at the project location. Apparent existing right-of-way extends approximately 30 ft. on either side of the centerline (60 ft. total). The proposed project involves replacing and widening the bridge superstructure to accommodate a deck with two 12 ft. travel lanes and 8 ft. shoulders and replacing components of the substructure. Scour protecting is likely to be required at the abutments.

The Indiana Department of Environmental Management (IDEM) is aware that many local government or not-for-profit entities are seeking grant monies, a bond issuance, or another public funding mechanism to cover some portion of the cost of a public works, infrastructure, or community development project. IDEM also is aware that in order to be eligible for such funding assistance, applicants are required to first evaluate the potential impacts that their particular project may have on the environment. In order to assist applicants seeking such financial assistance and to ensure that such projects do not have an adverse impact on the environment, IDEM has prepared the following list of environmental issues that each applicant must consider in order to minimize environmental impacts in compliance with all relevant state laws.

IDEM recommends that each applicant consider the following issues when moving forward with their project. IDEM also requests that, in addition to submitting the information requested above, each applicant also sign the attached certification, attesting to the fact that they have read the letter in its entirety, agree to abide by the recommendations of the letter, and to apply for any permits required from IDEM for the completion of their project.

IDEM recommends that any person(s) intending to complete a public works, infrastructure, or community development project using any public funding consider each of the following applicable recommendations and requirements:

WATER AND BIOTIC QUALITY

1. Section 404 of the Clean Water Act requires that you obtain a permit from the U.S. Army Corps of Engineers (USACE) before discharging dredged or fill materials into any wetlands or other waters, such as rivers, lakes, streams, and ditches. Other activities regulated include the relocation, channelization, widening, or other such alteration of a stream, and the mechanical clearing (use of heavy construction equipment) of wetlands. Thus, as a project owner or sponsor, it is your responsibility to ensure that no wetlands are disturbed without the proper permit. Although you may initially refer to the U.S. Fish and Wildlife Service National Wetland Inventory maps as a means of identifying potential areas of concern, please be mindful that those maps do not depict jurisdictional wetlands regulated by the USACE or the Department of Environmental Management. A valid jurisdictional wetlands determination can only be made by the USACE, using the 1987 Wetland Delineation Manual.

USACE recommends that you have a consultant check to determine whether your project will abut, or lie within, a wetland area. To view a list of consultants that have requested to be included on a list posted by the USACE on their Web site, see USACE Permits and Public Notices (<http://www.lrl.usace.army.mil/orf/default.asp>) (<http://www.lrl.usace.army.mil/orf/default.asp>) and then click on "Information" from the menu on the right-hand side of that page. Their "Consultant List" is the fourth entry down on the "Information" page. Please note that the USACE posts all consultants that request to appear on the list, and that inclusion of any particular consultant on the list does not represent an endorsement of that consultant by the USACE, or by IDEM.

Much of northern Indiana (Newton, Lake, Porter, LaPorte, St. Joseph, Elkhart, LaGrange, Steuben, and Dekalb counties; large portions of Jasper, Starke, Marshall, Noble, Allen, and Adams counties; and lesser portions of Benton, White, Pulaski, Kosciusko, and Wells counties) is served by the USACE District Office in Detroit (313-226-6812). The central and southern portions of the state (large portions of Benton, White, Pulaski, Kosciusko, and Wells counties; smaller portions of Jasper, Starke, Marshall, Noble, Allen, and Adams counties; and all other Indiana counties located in north-central, central, and southern Indiana) are served by the USACE Louisville District Office (502-315-6733).

Additional information on contacting these U.S. Army Corps of Engineers (USACE) District Offices, government agencies with jurisdiction over wetlands, and other water quality issues, can be found at <http://www.in.gov/idem/4396.htm> (<http://www.in.gov/idem/4396.htm>). IDEM recommends that impacts to wetlands and other water resources be avoided to the fullest extent.

2. In the event a Section 404 wetlands permit is required from the USACE, you also must obtain a Section 401 Water Quality Certification from the IDEM Office of Water Quality. To learn more about the water quality certification program, visit: <http://www.in.gov/idem/4384.htm> (<http://www.in.gov/idem/4384.htm>).
3. If the USACE determines that a wetland or other body of water is isolated and not subject to Clean Water Act regulation, it is still regulated by the state of Indiana. A state isolated wetland permit from IDEM's Office of Water Quality is required for any activity that results in the discharge of dredged or fill materials into isolated wetlands. To learn more about isolated wetlands, contact the Office of Water Quality at 317-233-8488.
4. If your project will impact more than 0.5 acres of wetland, stream relocation, or other large-scale alterations to bodies of water such as the creation of a dam or a water diversion, you should seek additional input from the Office of Water Quality, Wetlands staff at 317-233-8488.

5. Work within the one-hundred year floodway of a given body of water is regulated by the Department of Natural Resources, Division of Water. Contact this agency at 317-232-4160 for further information.
6. The physical disturbance of the stream and riparian vegetation, especially large trees overhanging any affected water bodies should be limited to only that which is absolutely necessary to complete the project. The shade provided by the large overhanging trees helps maintain proper stream temperatures and dissolved oxygen for aquatic life.
7. For projects involving construction activity (which includes clearing, grading, excavation and other land disturbing activities) that result in the disturbance of one (1), or more, acres of total land area, contact the Office of Water Quality – Watershed Planning Branch (317/233-1864) regarding the need for of a Rule 5 Storm Water Runoff Permit. Visit the following Web page
 - <http://www.in.gov/idem/4902.htm> (<http://www.in.gov/idem/4902.htm>)

To obtain, and operate under, a Rule 5 permit you will first need to develop a Construction Plan (<http://www.in.gov/idem/4917.htm#constreq>) (<http://www.in.gov/idem/4917.htm#constreq>), and as described in 327 IAC 15-5-6.5 (<http://www.in.gov/legislative/iac/T03270/A00150> [PDF]) (<http://www.in.gov/legislative/iac/T03270/A00150.PDF>), pages 16 through 19). Before you may apply for a Rule 5 Permit, or begin construction, you must submit your Construction Plan to your county Soil and Water Conservation District (SWCD) (<http://www.in.gov/isda/soil/contacts/map.html>) (<http://www.in.gov/isda/soil/contacts/map.html>)).

Upon receipt of the construction plan, personnel of the SWCD or the Indiana Department of Environmental Management will review the plan to determine if it meets the requirements of 327 IAC 15-5. Plans that are deemed deficient will require re-submittal. If the plan is sufficient you will be notified and instructed to submit the verification to IDEM as part of the Rule 5 Notice of Intent (NOI) submittal. Once construction begins, staff of the SWCD or Indiana Department of Environmental Management will perform inspections of activities at the site for compliance with the regulation.

Please be mindful that approximately 149 Municipal Separate Storm Sewer System (MS4) areas are now being established by various local governmental entities throughout the state as part of the implementation of Phase II federal storm water requirements. All of these MS4 areas will eventually take responsibility for Construction Plan review, inspection, and enforcement. As these MS4 areas obtain program approval from IDEM, they will be added to a list of MS4 areas posted on the IDEM Website at: <http://www.in.gov/idem/4900.htm> (<http://www.in.gov/idem/4900.htm>).

If your project is located in an IDEM-approved MS4 area, please contact the local MS4 program about meeting their storm water requirements. Once the MS4 approves the plan, the NOI can be submitted to IDEM.

Regardless of the size of your project, or which agency you work with to meet storm water requirements, IDEM recommends that appropriate structures and techniques be utilized both during the construction phase, and after completion of the project, to minimize the impacts associated with storm water runoff. The use of appropriate planning and site development and appropriate storm water quality measures are recommended to prevent soil from leaving the construction site during active land disturbance and for post construction water quality concerns. Information and assistance regarding storm water related to construction activities are available from the Soil and Water Conservation District (SWCD) offices in each county or from IDEM.

8. For projects involving impacts to fish and botanical resources, contact the Department of Natural Resources - Division of Fish and Wildlife (317-232-4080) for additional project input.
9. For projects involving water main construction, water main extensions, and new public water supplies, contact the Office of Water Quality - Drinking Water Branch (317-308-3299) regarding the need for permits.
10. For projects involving effluent discharges to waters of the State of Indiana , contact the Office of Water Quality - Permits Branch (317-233-0468) regarding the need for a National Pollutant Discharge Elimination System (NPDES) permit.
11. For projects involving the construction of wastewater facilities and sewer lines, contact the Office of Water Quality - Permits Branch (317-232-8675) regarding the need for permits.

AIR QUALITY

The above-noted project (see page 1) should be designed to minimize any impact on ambient air quality in, or near, the project area. The project must comply with all federal and state air pollution regulations. Consideration should be given to the following:

1. Regarding open burning, and disposing of organic debris generated by land clearing activities; some types of open burning are allowed under specific conditions (<http://www.in.gov/idem/4148.htm>) (<http://www.in.gov/idem/4148.htm>). You also can seek an open burning variance from IDEM.

IDEM generally recommends that you take vegetative wastes to a registered yard waste composting facility or that the waste be chipped or shredded with composting on-site. You must register with IDEM if more than 2,000 pounds is to be composted; contact 317-232-0066). The finished compost can then be used as a mulch or soil amendment. You also may bury any vegetative wastes (such as leaves, twigs, branches, limbs, tree trunks and stumps) on-site, although burying large quantities of such material can lead to subsidence problems.

2. Reasonable precautions must be taken to minimize fugitive dust emissions from construction and demolition activities. For example, wetting the area with water, constructing wind barriers, or treating dusty areas with chemical stabilizers (such as calcium chloride or several other commercial products). Dirt tracked onto paved roads from unpaved areas should be minimized.

If construction or demolition is conducted in a wooded area where blackbirds have roosted or abandoned buildings or building sections in which pigeons or bats have roosted for three to five years, precautionary measures should be taken to avoid an outbreak of histoplasmosis. This disease is caused by the fungus *Histoplasma capsulatum*, which stems from bird or bat droppings that have accumulated in one area for three to five years. The spores from this fungus become airborne when the area is disturbed and can cause infections over an entire community downwind of the site. The area should be wetted down prior to cleanup or demolition of the project site. For more detailed information on histoplasmosis prevention and control, please contact the Acute Disease Control Division of the Indiana State Department of Health at 317-233-7272.

3. The U.S. EPA and the U.S. Surgeon General recommend that people not have long-term exposure to radon at levels above 4 pCi/L. For a county-by-county map of predicted radon levels in Indiana , visit <http://www.in.gov/idem/4267.htm> (<http://www.in.gov/idem/4267.htm>).

The U.S. EPA further recommends that all homes and apartments (within three stories of ground level) be tested for radon. If in-home radon levels are determined to be 4 pCi/L or higher, then U.S. EPA recommends a follow-up test. If the second test confirms that radon levels are 4 pCi/L or higher, then U.S. EPA recommends the installation of radon-reduction measures. For a list of qualified radon testers and radon mitigation (or reduction) specialists, visit

http://www.in.gov/isdh/regsvcs/radhealth/pdfs/radon_testers_mitigators_list.pdf

(http://www.in.gov/isdh/regsvcs/radhealth/pdfs/radon_testers_mitigators_list.pdf). Also, is recommended that radon reduction measures be built into all new homes, particularly in areas like Indiana that have moderate to high predicted radon levels.

To learn more about radon, radon risks, and ways to reduce exposure, visit <http://www.in.gov/isdh/regsvcs/radhealth/radon.htm> (<http://www.in.gov/isdh/regsvcs/radhealth/radon.htm>), <http://www.in.gov/idem/4145.htm> (<http://www.in.gov/idem/4145.htm>), or <http://www.epa.gov/radon/index.html> (<http://www.epa.gov/radon/index.html>).

4. With respect to asbestos removal, all facilities slated for renovation or demolition (except residential buildings that have four (4) or fewer dwelling units and which will not be used for commercial purposes) must be inspected by an Indiana-licensed asbestos inspector prior to the commencement of any renovation or demolition activities. If regulated asbestos-containing material (RACM) that may become airborne is found, any subsequent demolition, renovation, or asbestos removal activities must be performed in accordance with the proper notification and emission control requirements.

If no asbestos is found where a renovation activity will occur, or if the renovation involves removal of less than 260 linear feet of RACM off of pipes, less than 160 square feet of RACM off of other facility components, or less than 35 cubic feet of RACM off of all facility components, the owner or operator of the project does not need to notify IDEM before beginning the renovation activity.

For questions on asbestos demolition and renovation activities, you can also call IDEM's Lead/Asbestos section at 1-888-574-8150.

In all cases where a demolition activity will occur (even if no asbestos is found), the owner or operator must still notify IDEM 10 working days prior to the demolition, using the form found at www.in.gov/icpr/webfile/formsdiv/44593.pdf.

Anyone submitting a renovation/demolition notification form will be billed a notification fee based upon the amount of friable asbestos containing material to be removed or demolished. Projects that involve the removal of more than 2,600 linear feet of friable asbestos containing materials on pipes, or 1,600 square feet or 400 cubic feet of friable asbestos containing material on other facility components, will be billed a fee of \$150 per project; projects below these amounts will be billed a fee of \$50 per project. Billings will occur on a quarterly basis.

For more information about IDEM policy regarding asbestos removal and disposal, visit: <http://www.in.gov/idem/4983.htm> (<http://www.in.gov/idem/4983.htm>).

5. With respect to lead-based paint removal, IDEM encourages all efforts to minimize human exposure to lead-based paint chips and dust. IDEM is particularly concerned that young children exposed to lead can suffer from learning disabilities. Although lead-based paint abatement efforts are not mandatory, any abatement that is conducted within housing built before January 1, 1978, or a child-occupied facility is required to comply with all lead-based paint work practice standards, licensing and notification requirements. For more information about lead-based paint removal, visit <http://www.in.gov/idem/permits/guide/waste/leadabatement.html> (<http://www.in.gov/idem/permits/guide/waste/leadabatement.html>).
6. Ensure that asphalt paving plants are permitted and operate properly. The use of cutback asphalt, or asphalt emulsion containing more than seven percent (7%) oil distillate, is prohibited during the months of April through October. See 326 IAC 8-5-2, Asphalt Paving Rule (<http://www.ai.org/legislative/iac/T03260/A00080.PDF> (<http://www.ai.org/legislative/iac/T03260/A00080.PDF>)).
7. If your project involves the construction of a new source of air emissions or the modification of an existing source of air emissions or air pollution control equipment, it will need to be reviewed by the IDEM Office of Air Quality (OAQ). A registration or permit may be required under 326 IAC 2 (www.ai.org/legislative/iac/t03260/a00020.pdf (<http://www.ai.org/legislative/iac/t03260/a00020.pdf>)). New sources that use or emit hazardous air pollutants may be subject to Section 112 of the Clean Air Act and corresponding state air regulations governing hazardous air pollutants.
8. For more information on air permits, visit <http://www.in.gov/idem/4223.htm> (<http://www.in.gov/idem/4223.htm>), or to initiate the IDEM air permitting process, please contact the Office of Air Quality Permit Reviewer of the Day at (317) 233-0178 or oamprod@idem.in.gov.

LAND QUALITY

In order to maintain compliance with all applicable laws regarding contamination and/or proper waste disposal, IDEM recommends that:

1. If the site is found to contain any areas used to dispose of solid or hazardous waste, you need to contact the Office of Land Quality (OLQ) at 317-308-3103.
2. All solid wastes generated by the project, or removed from the project site, need to be taken to a properly permitted solid waste processing or disposal facility. For more information, visit <http://www.in.gov/idem/4998.htm> (<http://www.in.gov/idem/4998.htm>).
3. If any contaminated soils are discovered during this project, they may be subject to disposal as hazardous waste. Please contact the OLQ at 317-308-3103 to obtain information on proper disposal procedures.
4. If Polychlorinated Biphenyls (PCBs) are found at this site, please contact the Industrial Waste Section of OLQ at 317-308-3103 for information regarding management of any PCB wastes from this site.
5. If there are any asbestos disposal issues related to this site, please contact the Industrial Waste Section of OLQ at 317-308-3103 for information regarding the management of asbestos wastes. (Asbestos removal is addressed above, under Air Quality.)
6. If the project involves the installation or removal of an underground storage tank, or involves contamination from an underground storage tank, you must contact the IDEM Underground Storage Tank program at 317-308-3039 (<http://www.in.gov/idem/4999.htm> (<http://www.in.gov/idem/4999.htm>)).

FINAL REMARKS

Should the applicant need to obtain any environmental permits in association with this proposed project, please be mindful that IC 13-15-8 requires that they notify all adjoining property owners and/or occupants within ten days of your submittal of each permit application. Applicants seeking multiple permits, may still meet the notification requirement with a single notice if all required permit applications are submitted with the same ten day period.

Please note that this letter does not constitute a permit, license, endorsement, or any other form of approval on the part of either the Indiana Department of Environmental Management or any other Indiana state agency.

Should you have any questions relating to the content or recommendations of this letter, or if you have additional questions about whether a more complete environmental review of your project should be conducted, please feel free to contact Steve Howell at (317) 232-8587, snhowell@idem.in.gov.

Signature(s) of the Applicant

I acknowledge that I am seeking grant monies, a bond issuance, or other public funding mechanism to cover some portion of the cost of the public works, infrastructure, or community development project as described herein, which I am working (possibly with others) to complete.

Project Description

The Indiana Department of Transportation (INDOT) is proposing to replace the structure carrying State Road (SR) 11 over South Fork Buck Creek (Bridge No. 011-31-06119), located in Harrison County, Indiana. This project is located at the SR 11 Bridge over South Fork Buck Creek, approximately 0.85 mile south of SR 211, specifically located in Section 33 of Township 4 South, Range 5 East as shown on the Lanesville USGS 7.5 Minute Topographic Map. The existing structure is a 24 ft. single-span bridge constructed in 1966. SR 11 is functionally classified as a major collector, consisting of two 10 ft. travel lanes with 1-2 ft. shoulders at the project location. Apparent existing right-of-way extends approximately 30 ft. on either side of the centerline (60 ft. total). The proposed project involves replacing and widening the bridge superstructure to accommodate a deck with two 12 ft. travel lanes and 8 ft. shoulders and replacing components of the substructure. Scour protecting is likely to be required at the abutments.

With my signature, I do hereby affirm that I have read the letter from the Indiana Department of Environmental Management that appears directly above. In addition, I understand that in order to complete the project in which I am interested, with a minimum impact to the environment, I must consider all the issues addressed in the aforementioned letter, and further, that I must obtain any required permits.

Dated Signature of the Public Owner Travis Mankin 6/18/18
Contact/Responsible Elected Official

Dated Signature of the Project Paul Killian 6/18/18
Planner/Consultant Contact Person
Paul Killian

Indiana Department of Environmental Management



Indiana Department of Environmental Management

We Protect Hoosiers and Our Environment.

100 N. Senate Avenue • Indianapolis, IN 46204

(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Eric J. Holcomb
Governor

Bruno Pigott
Commissioner

October 22, 2019

66-33
GAI Consultants
Attention: Harlan Ford
201 North Illinois Street, Suite 1700
Indianapolis, Indiana 46204

Dear Harlan Ford,

RE: Wellhead Protection Area
Proximity Determination
Des No 1600485
Bridge Replacement project (Bridge
No. 011-31-06119) located on
SR-11 over South Fork Buck Creek,
approximately 0.85 mile south of
SR 211
Elizabeth, Harrison County, Indiana

Upon review of the above referenced project site, it has been determined that the proposed project area **is not located within** a Wellhead Protection Area. The information is accurate to the best of our knowledge; however, there are in some cases a few factors that could impact the accuracy of this determination. Some Wellhead Protection Area Delineations have not been submitted, and many have not been approved by this office. In these cases we use a 3,000 foot fixed radius buffer to make the proximity determination. To find the status of a Public Water Supply System's (PWSS's) Wellhead Protection Area Delineation please visit our tracking database at <http://www.in.gov/idem/cleanwater/2456.htm> and scroll to the bottom of the page.

Note: the Drinking Water Branch has a self service feature which allows one to determine wellhead proximity without submitting the application form. Use the following instructions:

1. Go to <http://idemmaps.idem.in.gov/whpa2/>
2. Use the search tool located in the upper left hand corner of the application to zoom to your site of interest by way of city, county, or address; or use the mouse to click on the site of interest displayed on the map.
3. Once the site of interest has been located and selected, use the print tool to create a .pdf of a wellhead protection area proximity determination response.

In the future please consider using this self service feature if it suits your needs.

If you have any additional questions please feel free to contact me at the address above or at (317) 233-9158 and aturnbow@idem.in.gov.

Sincerely,

Alisha Turnbow,
Environmental Manager
Ground Water Section
Drinking Water Branch
Office of Water Quality



Please Reduce, Reuse, Recycle



Organization and Project Information

Project ID:
Des. ID: 1600485
Project Title: SR 11 over South Fork Buck Creek
Name of Organization: GAI Consultants, Inc.
Requested by: Paul Killian

Environmental Assessment Report

1. Geological Hazards:

- Potential Karst
- 1% Annual Chance Flood Hazard

2. Mineral Resources:

- Bedrock Resource: High Potential
- Sand and Gravel Resource: None documented in the area

3. Active or abandoned mineral resources extraction sites:

- None documented in the area

*All map layers from Indiana Map (maps.indiana.edu)

DISCLAIMER:

This document was compiled by Indiana University, Indiana Geological Survey, using data believed to be accurate; however, a degree of error is inherent in all data. This product is distributed "AS-IS" without warranties of any kind, either expressed or implied, including but not limited to warranties of suitability to a particular purpose or use. No attempt has been made in either the design or production of these data and document to define the limits or jurisdiction of any federal, state, or local government. The data used to assemble this document are intended for use only at the published scale of the source data or smaller (see the metadata links below) and are for reference purposes only. They are not to be construed as a legal document or survey instrument. A detailed on-the-ground survey and historical analysis of a single site may differ from these data and this document.

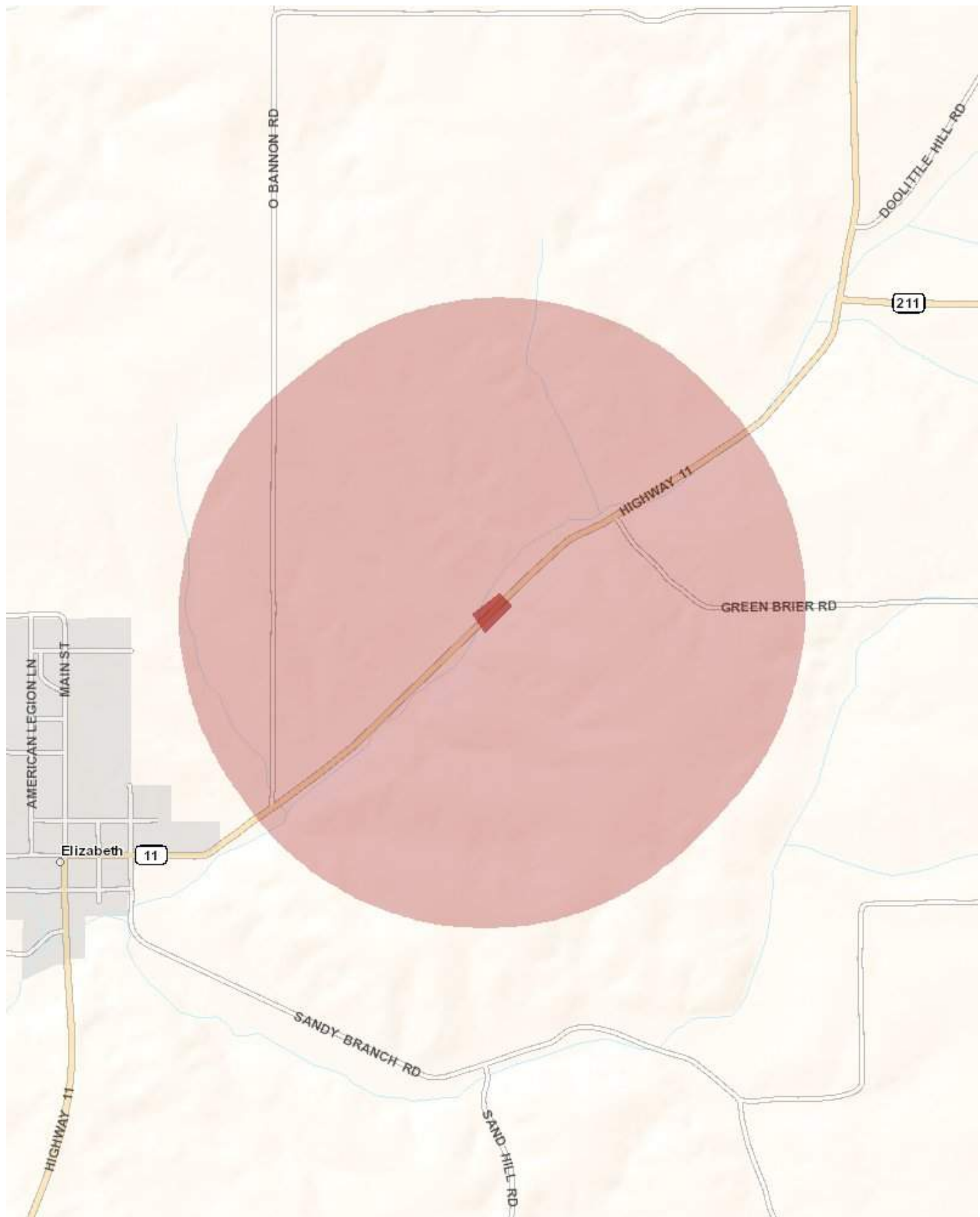
This information was furnished by Indiana Geological Survey

Address: 611 N. Walnut Grove Avenue, Bloomington, IN 47405-2208

Email: IGSEnvir@indiana.edu

Phone: 812 855-7428

Date: October 06, 2017



Metadata:

- https://maps.indiana.edu/metadata/Hydrology/Karst_Sinkhole_Areas.html
- https://maps.indiana.edu/metadata/Hydrology/Floodplains_FIRM.html
- https://maps.indiana.edu/metadata/Geology/Bedrock_Geology.html



United States Department of Agriculture

Natural Resources Conservation Service
Indiana State Office
6013 Lakeside Boulevard
Indianapolis, Indiana 46278
317-290-3200

October 4, 2017

Paul Killian
Project Environmental Specialist
GAI Consultants
6420 Castleway West Drive
Indianapolis, Indiana 46250

Dear Mr. Killian:

The proposed project to replace structure in Harrison County, Indiana, (Des No. 1600485) as referred in your letter received on October 4, 2017, will not cause a conversion of prime farmland.

If you need additional information, please contact Rick Neilson at 317-295-5875.

Sincerely,

A handwritten signature in blue ink that reads "Jane E. Hardisty".

JANE E. HARDISTY
State Conservationist

Enclosure

Helping People Help the Land.



USDA is an equal opportunity provider and employer.



INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N955
Indianapolis, Indiana 46204

PHONE: (317) 232-1477
FAX: (317) 232-1499

Eric Holcomb, Governor
Joe McGuinness, Commissioner

October 6, 2017

Mr. Paul Killian, Project Environmental Specialist
GAI Consultants
6420 Castleway West Drive
Indianapolis, IN 46250

Subject: Early Coordination Review (Des. No. 1600485)

Dear Mr. Killian,

In response to your request on October 4, 2017 for early coordination review of a project to replace the structure carrying SR 11 over South Fork Buck Creek (Bridge No. 011-31-06119), located in Harrison County, Indiana; the Indiana Department of Transportation, Office of Aviation has reviewed the information and provides the following:

Are there any existing or proposed public-use airports within 5 nautical miles of the project limits (IC 8-21-10-6)?

The nearest public-use airports is located beyond 5 nautical miles of the project site.

Will an Indiana Tall Structure permit (IC 8-21-10-3-a) and/or Noise Sensitive (IC 8-21-10-3-b) permit be required?

Based upon the provided information, an Indiana Tall Structure permit would not be required unless the project involves the construction of a temporary (e.g., crane) or permanent structure that exceeds a height of 200 feet above ground level.

For any questions related to Indiana Tall Structure and/or Noise Sensitive permitting, please contact James Kinder at (317) 232-1485 or jkinder2@indot.in.gov.

Sincerely,

Adam French, MPA
Chief Airport Inspector, Office of Aviation
Indiana Department of Transportation

State of Indiana
DEPARTMENT OF NATURAL RESOURCES
Division of Fish and Wildlife
Early Coordination/Environmental Assessment

DNR #: ER-20117

Request Received: October 4, 2017

Requestor: GAI Consultants Inc
Paul Killian
6420 Castleway West Drive
Indianapolis, IN 46250-1914

Project: SR 11 bridge replacements over South Fork Buck Creek:
1) Des #1600485 (#011-31-06119), about 0.85 mile south of SR 211
2) Des #1600486 (#011-31-06120), about 0.51 mile south of SR 211

County/Site info: Harrison

The Indiana Department of Natural Resources has reviewed the above referenced project per your request. Our agency offers the following comments for your information and in accordance with the National Environmental Policy Act of 1969.

If our agency has regulatory jurisdiction over the project, the recommendations contained in this letter may become requirements of any permit issued. If we do not have permitting authority, all recommendations are voluntary.

Regulatory Assessment: This proposal will require the formal approval of our agency for construction in a floodway pursuant to the Flood Control Act (IC 14-28-1), unless it qualifies for a bridge exemption (see enclosure). Please include a copy of this letter with the permit application if the project does not meet the bridge exemption criteria.

Natural Heritage Database: The Natural Heritage Program's data have been checked. To date, no plant or animal species listed as state or federally threatened, endangered, or rare have been reported to occur in the project vicinity.

Fish & Wildlife Comments: Avoid and minimize impacts to fish, wildlife, and botanical resources to the greatest extent possible, and compensate for impacts. The following are recommendations that address potential impacts identified in the proposed project area:

1) Scour Protection:

Minimize the use of riprap and use alternative erosion protection materials whenever possible. Riprap must not be placed in the active thalweg channel or placed in the streambed in a manner that precludes fish or aquatic organism passage (riprap must not be placed above the existing streambed elevation). Riprap may be used only at the toe of the sideslopes up to the ordinary high water mark (OHWM). The banks above the OHWM must be restored, stabilized, and revegetated using geotextiles and a mixture of grasses, sedges, wildflowers, shrubs, and trees native to Southern Indiana and specifically for stream bank/floodway stabilization purposes as soon as possible upon completion.

Where hard armoring is needed, wildlife passage can be facilitated by using a smooth-surfaced material instead of riprap, such as articulated concrete block mats, fabric-formed concrete mats or other similar smooth-surfaced materials as these materials will not impair wildlife movement.

Information about bioengineering techniques can be found at <http://www.in.gov/legislative/jac/20120404-IR-312120154NRA.xml.pdf>. Also, the following is a USDA/NRCS document that outlines many different bioengineering and other bank stabilization techniques: <http://directives.sc.egov.usda.gov/17553.wba>.

Attachments: A - Bridge Exemption Criteria

State of Indiana
DEPARTMENT OF NATURAL RESOURCES
Division of Fish and Wildlife
Early Coordination/Environmental Assessment

2) Riparian Habitat:

We recommend a mitigation plan be developed (and submitted with the permit application, if required) for any unavoidable habitat impacts that will occur. The DNR's Floodway Habitat Mitigation guidelines (and plant lists) can be found online at: <http://www.in.gov/legislative/iac/20140806-IR-312140295NRA.xml.pdf>.

Impacts to non-wetland forest of one (1) acre or more should be mitigated at a minimum 2:1 ratio. If less than one acre of non-wetland forest is removed in a rural setting, replacement should be at a 1:1 ratio based on area. Impacts to non-wetland forest under one (1) acre in an urban setting should be mitigated by planting five trees, at least 2 inches in diameter-at-breast height (dbh), for each tree which is removed that is 10" dbh or greater (5:1 mitigation based on the number of large trees). Impacts to wetland habitat should be mitigated at the appropriate ratio according to the 1991 INDOT/IDNR/USFWS Memorandum of Understanding.

The mitigation site should be located in the floodway, downstream of the one (1) square mile drainage area of that stream (or another stream within the 8-digit HUC, preferably as close to the impact site as possible) and adjacent to existing forested riparian habitat.

The additional measures listed below should be implemented to avoid, minimize, or compensate for impacts to fish, wildlife, and botanical resources:

1. Revegetate all bare and disturbed areas in the floodway with a mixture of native grasses, sedges, wildflowers as soon as possible upon completion. Do not use any varieties of Tall Fescue or other non-native plants (e.g. crown-vetch).
2. Minimize and contain within the project limits inchannel disturbance and the clearing of trees and brush.
3. Do not work in the waterway from April 1 through June 30 without the prior written approval of the Division of Fish and Wildlife.
4. Do not cut any trees suitable for Indiana bat or Northern Long-eared bat roosting (greater than 3 inches dbh, living or dead, with loose hanging bark, or with cracks, crevices, or cavities) from April 1 through September 30.
5. Do not excavate in the low flow area except for the placement of piers, foundations, and riprap, or removal of the old structure.
6. Do not construct any temporary runarounds, access bridges, causeways, cofferdams, diversions, or pumparounds.
7. Use minimum average 6 inch graded riprap stone extended below the normal water level to provide habitat for aquatic organisms in the voids.
8. Plant native hardwood trees along the top of the bank and right-of-way to replace the vegetation destroyed during construction.
9. Post "Do Not Mow or Spray" signs along the right-of-way.
10. Appropriately designed measures for controlling erosion and sediment must be implemented to prevent sediment from entering the stream or leaving the construction site; maintain these measures until construction is complete and all disturbed areas are stabilized.
11. Seed and protect all disturbed slopes that are 3:1 or steeper with heavy duty biodegradable erosion control blankets (follow manufacturer's recommendations for selection and installation; seed and apply mulch on all other disturbed areas).

THIS IS NOT A PERMIT

State of Indiana
DEPARTMENT OF NATURAL RESOURCES
Division of Fish and Wildlife
Early Coordination/Environmental Assessment

Contact Staff:

Christie L. Stanifer, Environ. Coordinator, Fish & Wildlife
Our agency appreciates this opportunity to be of service. Please contact the above staff member at (317) 232-4080 if we can be of further assistance.



Date: November 3, 2017

Christie L. Stanifer
Environ. Coordinator
Division of Fish and Wildlife

Attachments: A - Bridge Exemption Criteria

The Flood Control Act (IC 14-28-1) contains a provision (Section 22), which exempts certain bridge projects from its permitting requirement. Specifically, the Act states:

A permit is not required for "a construction or reconstruction project on a state or county highway bridge in a rural area that crosses a stream having an upstream drainage area of not more than fifty (50) square miles..."

Therefore, in order for a bridge project to be exempt, it must:

- be a state or county highway department project;
- be a bridge;
- be located in a rural area; and
- cross a stream having an upstream drainage area of less than 50 square miles.

The initial criterion is very specific - the structure must be a state or county highway department project.

The second requirement mandates that the project be a bridge (for this provision, the Department of Natural Resources considers a culvert to be a bridge). Projects such as bank protection, spoil disposal, borrow pits, etc. are not automatically exempt. Anyone proposing to undertake a non-bridge related activity should consult with the Division of Water's Technical Services Section staff at 317-232-4160 (or toll free at 1-877-928-3755) regarding the applicability of the exemption prior to initiating work.

The third criterion states that the project must be located in a rural area. The phrase "rural area" is defined as an area:

- where the lowest floor elevation, including a basement, of any residential, commercial, or industrial building impacted by the project is at least 2 feet above the 100 year flood elevation with the project in place;
- located outside the corporate boundaries of a consolidated or an incorporated city or town; and
- located outside of the territorial authority for comprehensive planning (generally, a 2 mile planning buffer around a city or town).

The final criterion limits the exemption to a project crossing a stream having an upstream drainage area of less than 50 square miles. The drainage area includes all land area contributing to runoff above the project site and is determined from the United States Geological Survey 7½ minute series quadrangle maps. The Department of Natural Resources will determine the drainage area upon written request.

This exemption has been grossly misunderstood and liberally applied in the past. As a result, the Department of Natural Resources is taking a firm stance on future violations. If challenged, it will be the responsibility of the person claiming the exemption to prove to the Department that all 4 criteria have been satisfied. Failure to do so will result in the Department initiating litigation with the potential for the imposition of fines in amounts up to \$10,000 per day.

Note: This exemption only applies to the Flood Control Act. If a bridge is to be constructed over a navigable waterway, or over or near a public freshwater lake, a permit will be required.

Paul Killian

From: McWilliams, Robin <robin_mcwilliams@fws.gov>
Sent: Wednesday, October 04, 2017 2:48 PM
To: Paul Killian
Subject: Re: SR 11 over SF Buck Creek (Des 1600485) Early Coordination

Dear Mr. Killian,

This responds to your recent letter, requesting our comments on the aforementioned project.

These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (16 U.S.C. 661 et. seq.) and are consistent with the intent of the National Environmental Policy Act of 1969, the Endangered Species Act of 1973, and the U. S. Fish and Wildlife Service's Mitigation Policy.

The project is within the range of the Indiana bat (*Myotis sodalis*) and northern long-eared bat (*Myotis septentrionalis*) and should follow the new Indiana bat/northern long-eared bat programmatic consultation process. We will review that information once it is received.

Based on a review of the information you provided, the U.S. Fish and Wildlife Service has no objections to the project as currently proposed. However, should new information arise pertaining to project plans or a revised species list be published, it will be necessary for the Federal agency to reinitiate consultation.

We appreciate the opportunity to comment at this early stage of project planning. If project plans change such that fish and wildlife habitat may be affected, please recoordinate with our office as soon as possible. If you have any questions about our recommendations, please call (812) 334-4261.

Sincerely,

Robin Munson

Robin McWilliams Munson

U.S. Fish and Wildlife Service
620 South Walker Street
Bloomington, Indiana 46403
812-334-4261 x. 207 Fax: 812-334-4273

Monday, Tuesday - 7:30a-3:00p

Wednesday, Thursday - telework 8:30a-3:00p

On Wed, Oct 4, 2017 at 11:20 AM, Paul Killian <P.Killian@gaiconsultants.com> wrote:

Hi Robin,

The Indiana Department of Transportation (INDOT) is proposing to replace the structure carrying SR 11 over South Fork Buck Creek (Des 1600485) in Harrison County, Indiana. We are seeking comments for resources under your jurisdiction that may be impacted by the proposed project. Please see the attached letter for project details. We will be accepting comments for 30 days from this email, unless a request for an accommodation is made. Please let me know if you have any questions.

Thank you,

Paul D. Killian

Project Environmental Specialist

6420 Castleway West Drive, Indianapolis, IN 46250

T 317.570.6800 **D** 317.436.4844 **M** 317.402.9904

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Paul Killian

From: Kevin Russel <K.Russel@harrisoncounty.in.gov>
Sent: Thursday, October 05, 2017 9:25 AM
To: Paul Killian
Subject: RE: SR 11 over SF Buck Creek (Des 1600485) Early Coordination

Paul,

Thank you for the opportunity to comment. It doesn't appear likely that the replacement of this structure will have any impact on any of our county roads as long as county roads are not used for a detour route. Our only request would be that you keep us informed as the design progresses so that if there is any impact to a county road we have the opportunity to work with you to mitigate those impacts.

Thanks,
Kevin Russel, PE
Director / Engineer
Harrison County Highway Department

Harrison County Highway Department
1359 Old Highway 135 SW
Corydon, Indiana 47112

812-738-2920 – phone

812-738-2929 – fax

www.HarrisonCounty.In.gov



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From: Paul Killian [mailto:P.Killian@gaiconsultants.com]
Sent: Wednesday, October 04, 2017 11:22 AM
To: Kevin Russel <K.Russel@harrisoncounty.in.gov>
Subject: SR 11 over SF Buck Creek (Des 1600485) Early Coordination

Mr. Russel,

The Indiana Department of Transportation (INDOT) is proposing to replace the structure carrying SR 11 over South Fork Buck Creek (Des 1600485) in Harrison County, Indiana. We are seeking comments for resources under your jurisdiction that may be impacted by the proposed project. Please see the attached letter for project details. We will be accepting comments for 30 days from this email, unless a request for an accommodation is made. Please let me know if you have any questions.

Thank you,

Paul D. Killian
Project Environmental Specialist

6420 Castleway West Drive, Indianapolis, IN 46250
T 317.570.6800 **D** 317.436.4844 **M** 317.402.9904

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United States Department of the Interior



FISH AND WILDLIFE SERVICE

Indiana Ecological Services Field Office

620 South Walker Street

Bloomington, IN 47403-2121

Phone: (812) 334-4261 Fax: (812) 334-4273

<http://www.fws.gov/midwest/Endangered/section7/s7process/step1.html>

In Reply Refer To:

January 31, 2020

Consultation Code: 03E12000-2018-SLI-0437

Event Code: 03E12000-2020-E-03123

Project Name: SR 11 over South Fork Buck Creek (Des. 1600485) - Bridge Replacement

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The attached species list identifies any federally threatened, endangered, proposed and candidate species that may occur within the boundary of your proposed project or may be affected by your proposed project. The list also includes designated critical habitat if present within your proposed project area or affected by your project. This list is provided to you as the initial step of the consultation process required under section 7(c) of the Endangered Species Act, also referred to as Section 7 Consultation.

Section 7 of the Endangered Species Act of 1973 requires that actions authorized, funded, or carried out by Federal agencies not jeopardize federally threatened or endangered species or adversely modify designated critical habitat. To fulfill this mandate, Federal agencies (or their designated non-federal representative) must consult with the Service if they determine their project “may affect” listed species or critical habitat.

Under 50 CFR 402.12(e) (the regulations that implement Section 7 of the Endangered Species Act) the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally. You may verify the list by visiting the ECOS-IPaC website <http://ecos.fws.gov/ipac/> at regular intervals during project planning and implementation and completing the same process you used to receive the attached list. As an alternative, you may contact this Ecological Services Field Office for updates.

Please use the species list provided and visit the U.S. Fish and Wildlife Service's Region 3 Section 7 Technical Assistance website at - <http://www.fws.gov/midwest/endangered/section7/s7process/index.html>. This website contains step-by-step instructions which will help you

determine if your project will have an adverse effect on listed species and will help lead you through the Section 7 process.

For all **wind energy projects** and **projects that include installing towers that use guy wires or are over 200 feet in height**, please contact this field office directly for assistance, even if no federally listed plants, animals or critical habitat are present within your proposed project or may be affected by your proposed project.

Although no longer protected under the Endangered Species Act, be aware that bald eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*) and Migratory Bird Treaty Act (16 U.S.C. 703 *et seq.*), as are golden eagles. Projects affecting these species may require measures to avoid harming eagles or may require a permit. If your project is near an eagle nest or winter roost area, see our Eagle Permits website at <http://www.fws.gov/midwest/midwestbird/EaglePermits/index.html> to help you determine if you can avoid impacting eagles or if a permit may be necessary.

We appreciate your concern for threatened and endangered species. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Indiana Ecological Services Field Office

620 South Walker Street

Bloomington, IN 47403-2121

(812) 334-4261

Project Summary

Consultation Code: 03E12000-2018-SLI-0437

Event Code: 03E12000-2020-E-03123

Project Name: SR 11 over South Fork Buck Creek (Des. 1600485) - Bridge Replacement

Project Type: TRANSPORTATION

Project Description: The Indiana Department of Transportation (INDOT) is proposing to replace the structure carrying State Road (SR) 11 over South Fork Buck Creek (Bridge No. 011-31-06119), located in Harrison County, Indiana. This project is located at the SR 11 Bridge over South Fork Buck Creek, approximately 0.85 mile south of SR 211, specifically located in Section 33 of Township 4 South, Range 5 East as shown on the Lanesville USGS 7.5 Minute Topographic Map. The existing structure is a 24 ft. single-span bridge constructed in 1966. SR 11 is functionally classified as a major collector, consisting of two 10 ft. travel lanes with 1-2 ft. shoulders at the project location. The proposed project involves replacing and widening the structure to accommodate 11ft. travel lanes and 2-4ft. paved shoulders with a 30 ft. span reinforced concrete slab structure, approximately 32 ft. in length. Suitable summer habitat is located within the project area. Approximately 0.05 acre of tree trimming/clearing may be necessary to complete the project; however, tree trimming/clearing will be kept to the bare minimum. Dominant tree species include American sycamore (*Platanus occidentalis*) and red maple (*Acer rubrum*). Tree trimming and clearing will take place during the inactive season. A review of the USFWS database for bat hibernacula within 0.5 miles of the project area was completed by INDOT, Seymour District on March 2, 2018. Their review did not indicate the presence of endangered bat species in or within the 0.5 miles search radius of the project area. No permanent lighting will be installed or replaced as part of this project; however, the use of temporary lighting may be needed. Existing right-of-way extends approximately 30 ft. on either side of the centerline (60 ft. total). Approximately 0.539 acre of permanent ROW, and 0.012 acre of temporary ROW will be required for this project. Construction for this project is expected to begin in Spring of 2021.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/38.12694472120893N85.96102051409869W>



Counties: Harrison, IN

Endangered Species Act Species

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 1 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Gray Bat <i>Myotis grisescens</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6329	Endangered
Indiana Bat <i>Myotis sodalis</i> There is final critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949 Species survey guidelines: https://ecos.fws.gov/ipac/guideline/survey/population/1/office/31440.pdf	Endangered
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: <ul style="list-style-type: none"> ▪ Incidental take of the NLEB is not prohibited here. Federal agencies may consult using the 4(d) rule streamlined process. Transportation projects may consult using the programmatic process. See www.fws.gov/midwest/endangered/mammals/nleb/index.html Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Critical habitats

There is 1 critical habitat wholly or partially within your project area under this office's jurisdiction.

NAME	STATUS
Indiana Bat <i>Myotis sodalis</i> https://ecos.fws.gov/ecp/species/5949#crithab	Final

Paul Killian

From: Williamson, Brad <BWILLIAMSON@indot.IN.gov>
Sent: Friday, March 02, 2018 10:35 AM
To: Paul Killian
Subject: RE: USFWS Prog Cons 0.5 mile search for Seymour On-Call

A review of the USFWS database did not indicate the presence of endangered bat species in or within 0.5 mile of the project areas. The range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to "Using the USFWS's IPaC System for Listed Bat Consultation for INDOT Projects" dated October 25, 2017.

If no useful information is available in BIAS to confirm there is no evidence of bats at each bridge/small structure then additional investigation to confirm the presence or absence of bats will be necessary.

Let me know if you need anything more.

Brad Williamson

Environmental Manager 2

Capitol Program Management
Indiana Department of Transportation
185 Agrico Lane
Seymour, IN 47274
Office: (812)524-3971
Email: bwilliamson@indot.in.gov

From: Paul Killian [mailto:P.Killian@gaiconsultants.com]
Sent: Monday, February 26, 2018 12:06 PM
To: Williamson, Brad <BWILLIAMSON@indot.IN.gov>
Subject: USFWS Prog Cons 0.5 mile search for Seymour On-Call

**** This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email. ****

Hi Brad,

I am in the process of finishing up our Seymour On-Call RFIs and need to address the section on ETR species. I have attached location maps and a KMZ file containing the project locations to facilitate the USFWS database search for bats and the rusty-patched bumblebee within 0.5 miles of the project area. I will be completing the IPaC process shortly and will add you to each of the projects as I go.

The Seymour On-Call includes:

- 1.) SR 11 over South Fork Buck Creek (Des 1600485)
- 2.) SR 11 over South Fork Buck Creek (Des 1600486)
- 3.) SR 11 over UNT to Union Creek (Des 1600665)
- 4.) SR 46 over North Fork Salt Creek (Des 1701170)
- 5.) SR 67 over East Fork White Lick Creek (Des 1383728 & 1383734)
- 6.) SR 67 Resurface (Des 1700137)
- 7.) SR 156 over Goose Creek (Des 1593206)

8.) SR 156 over Wade Creek (Des 1400024)

9.) SR 256 over Little Creek (Des 1600495)

Please let me know if you have any questions.

Thanks,

Paul D. Killian

Project Environmental Specialist

6420 Castleway West Drive, Indianapolis, IN 46250

T 317.570.6800 **D** 317.436.4844 **M** 317.402.9904

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United States Department of the Interior



FISH AND WILDLIFE SERVICE

Indiana Ecological Services Field Office

620 South Walker Street

Bloomington, IN 47403-2121

Phone: (812) 334-4261 Fax: (812) 334-4273

<http://www.fws.gov/midwest/Endangered/section7/s7process/step1.html>

In Reply Refer To:

March 04, 2020

Consultation Code: 03E12000-2018-I-0437

Event Code: 03E12000-2020-E-04422

Project Name: SR 11 over South Fork Buck Creek (Des. 1600485) - Bridge Replacement

Subject: Concurrence verification letter for the 'SR 11 over South Fork Buck Creek (Des. 1600485) - Bridge Replacement' project under the revised February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat.

To whom it may concern:

The U.S. Fish and Wildlife Service (Service) has received your request to verify that the **SR 11 over South Fork Buck Creek (Des. 1600485) - Bridge Replacement** (Proposed Action) may rely on the concurrence provided in the February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat (PBO) to satisfy requirements under Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C 1531 *et seq.*).

Based on the information you provided (Project Description shown below), you have determined that the Proposed Action is within the scope and adheres to the criteria of the PBO, including the adoption of applicable avoidance and minimization measures, and may affect, but is not likely to adversely affect (NLAA) the endangered Indiana bat (*Myotis sodalis*) and/or the threatened Northern long-eared bat (*Myotis septentrionalis*).

The Service has 14 calendar days to notify the lead Federal action agency or designated non-federal representative if we determine that the Proposed Action does not meet the criteria for a NLAA determination under the PBO. If we do not notify the lead Federal action agency or designated non-federal representative within that timeframe, you may proceed with the Proposed Action under the terms of the NLAA concurrence provided in the PBO. This verification period allows Service Field Offices to apply local knowledge to implementation of the PBO, as we may identify a small subset of actions having impacts that were unanticipated. In such instances, Service Field Offices may request additional information that is necessary to verify inclusion of the proposed action under the PBO.

For Proposed Actions that include bridge/structure removal, replacement, and/or maintenance activities: If your initial bridge/structure assessments failed to detect Indiana bats, but you later detect bats during construction, please submit the Post Assessment Discovery of Bats at Bridge/Structure Form (User Guide Appendix E) to this Service Office. In these instances, potential incidental take of Indiana bats may be exempted provided that the take is reported to the Service.

If the Proposed Action is modified, or new information reveals that it may affect the Indiana bat and/or Northern long-eared bat in a manner or to an extent not considered in the PBO, further review to conclude the requirements of ESA Section 7(a)(2) may be required. If the Proposed Action may affect any other federally-listed or proposed species, and/or any designated critical habitat, additional consultation between the lead Federal action agency and this Service Office is required. If the proposed action has the potential to take bald or golden eagles, additional coordination with the Service under the Bald and Golden Eagle Protection Act may also be required. In either of these circumstances, please contact this Service Office.

The following species may occur in your project area and **are not** covered by this determination:

- Gray Bat, *Myotis grisescens* (Endangered)

Project Description

The following project name and description was collected in IPaC as part of the endangered species review process.

Name

SR 11 over South Fork Buck Creek (Des. 1600485) - Bridge Replacement

Description

The Indiana Department of Transportation (INDOT) is proposing to replace the structure carrying State Road (SR) 11 over South Fork Buck Creek (Bridge No. 011-31-06119), located in Harrison County, Indiana. This project is located at the SR 11 Bridge over South Fork Buck Creek, approximately 0.85 mile south of SR 211, specifically located in Section 33 of Township 4 South, Range 5 East as shown on the Lanesville USGS 7.5 Minute Topographic Map. The existing structure is a 24 ft. single-span bridge constructed in 1966. SR 11 is functionally classified as a major collector, consisting of two 10 ft. travel lanes with 1-2 ft. shoulders at the project location. The proposed project involves replacing and widening the structure to accommodate 11ft. travel lanes and 2-4ft. paved shoulders with a 30 ft. span reinforced concrete slab structure, approximately 32 ft. in length. Suitable summer habitat is located within the project area. Approximately 0.05 acre of tree trimming/clearing may be necessary to complete the project; however, tree trimming/clearing will be kept to the bare minimum. Dominant tree species include American sycamore (*Platanus occidentalis*) and red maple (*Acer rubrum*). Tree trimming and clearing will take place during the inactive season. A review of the USFWS database for bat hibernacula within 0.5 miles of the project area was completed by INDOT, Seymour District on March 2, 2018. Their review did not indicate the presence of endangered bat species in or within the 0.5 miles search radius of the project area. No permanent lighting will be installed or replaced as part of this project; however, the use of temporary lighting may be needed. Existing right-of-way extends approximately 30 ft. on either side of the centerline (60 ft. total). Approximately 0.539 acre of permanent ROW, and 0.012 acre of temporary ROW will be required for this project. Construction for this project is expected to begin in Spring of 2021.

Determination Key Result

Based on your answers provided, this project(s) may affect, but is not likely to adversely affect the endangered Indiana bat and/or the threatened Northern long-eared bat, therefore, consultation with the U.S. Fish and Wildlife Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended 16 U.S.C. 1531 *et seq.*) is required. However, also based on your answers provided, this project may rely on the concurrence provided in the revised February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat.

Qualification Interview

1. Is the project within the range of the Indiana bat^[1]?

[1] See [Indiana bat species profile](#)

Automatically answered

Yes

2. Is the project within the range of the Northern long-eared bat^[1]?

[1] See [Northern long-eared bat species profile](#)

Automatically answered

Yes

3. Which Federal Agency is the lead for the action?

A) Federal Highway Administration (FHWA)

4. Are *all* project activities limited to non-construction^[1] activities only? (examples of non-construction activities include: bridge/abandoned structure assessments, surveys, planning and technical studies, property inspections, and property sales)

[1] Construction refers to activities involving ground disturbance, percussive noise, and/or lighting.

No

5. Does the project include *any* activities that are **greater than** 300 feet from existing road/rail surfaces^[1]?

[1] Road surface is defined as the actively used [e.g. motorized vehicles] driving surface and shoulders [may be pavement, gravel, etc.] and rail surface is defined as the edge of the actively used rail ballast.

No

6. Does the project include *any* activities **within** 0.5 miles of a known Indiana bat and/or NLEB hibernaculum^[1]?

[1] For the purpose of this consultation, a hibernaculum is a site, most often a cave or mine, where bats hibernate during the winter (see suitable habitat), but could also include bridges and structures if bats are found to be hibernating there during the winter.

No

7. Is the project located **within** a karst area?

Yes

8. Will the project include *any* type of activity that could impact a **known** hibernaculum^[1], or impact a karst feature (e.g., sinkhole, losing stream, or spring) that could result in effects to a **known** hibernaculum?

[1] For the purpose of this consultation, a hibernaculum is a site, most often a cave or mine, where bats hibernate during the winter (see suitable habitat), but could also include bridges and structures if bats are found to be hibernating there during the winter.

No

9. Is there *any* suitable^[1] summer habitat for Indiana Bat or NLEB **within** the project action area^[2]? (includes any trees suitable for maternity, roosting, foraging, or travelling habitat)

[1] See the Service's [summer survey guidance](#) for our current definitions of suitable habitat.

[2] The action area is defined as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 CFR Section 402.02). Further clarification is provided by the [national consultation FAQs](#).

Yes

10. Will the project remove *any* suitable summer habitat^[1] and/or remove/trim any existing trees **within** suitable summer habitat?

[1] See the Service's [summer survey guidance](#) for our current definitions of suitable habitat.

Yes

11. Will the project clear more than 20 acres of suitable habitat per 5-mile section of road/rail?

No

12. Have presence/probable absence (P/A) summer surveys^{[1][2]} been conducted^{[3][4]} **within** the suitable habitat located within your project action area?

[1] See the Service's [summer survey guidance](#) for our current definitions of suitable habitat.

[2] Presence/probable absence summer surveys conducted within the fall swarming/spring emergence home range of a documented Indiana bat hibernaculum (contact local Service Field Office for appropriate distance from hibernacula) that result in a negative finding requires additional consultation with the local Service Field Office to determine if clearing of forested habitat is appropriate and/or if seasonal clearing restrictions are needed to avoid and minimize potential adverse effects on fall swarming and spring emerging Indiana bats.

[3] For projects within the range of either the Indiana bat or NLEB in which suitable habitat is present, and no bat surveys have been conducted, the transportation agency will assume presence of the appropriate species. This assumption of presence should be based upon the presence of suitable habitat and the capability of bats to occupy it because of their mobility.

[4] Negative presence/probable absence survey results obtained using the [summer survey guidance](#) are valid for a minimum of two years from the completion of the survey unless new information (e.g., other nearby surveys) suggest otherwise.

No

13. Does the project include activities **within documented Indiana bat habitat**^{[1][2]}?

[1] Documented roosting or foraging habitat – for the purposes of this consultation, we are considering documented habitat as that where Indiana bats and/or NLEB have actually been captured and tracked using (1) radio telemetry to roosts; (2) radio telemetry biangulation/triangulation to estimate foraging areas; or (3) foraging areas with repeated use documented using acoustics. Documented roosting habitat is also considered as suitable summer habitat within 0.25 miles of documented roosts.)

[2] For the purposes of this key, we are considering documented corridors as that where Indiana bats and/or NLEB have actually been captured and tracked to using (1) radio telemetry; or (2) treed corridors located directly between documented roosting and foraging habitat.

No

14. Will the removal or trimming of habitat or trees occur **within** suitable but **undocumented Indiana bat** roosting/foraging habitat or travel corridors?

Yes

15. What time of year will the removal or trimming of habitat or trees **within** suitable but **undocumented Indiana bat** roosting/foraging habitat or travel corridors occur^[1]?

[1] Coordinate with the local Service Field Office for appropriate dates.

B) During the inactive season

16. Does the project include activities **within documented NLEB habitat**^{[1][2]}?

[1] Documented roosting or foraging habitat – for the purposes of this consultation, we are considering documented habitat as that where Indiana bats and/or NLEB have actually been captured and tracked using (1) radio telemetry to roosts; (2) radio telemetry biangulation/triangulation to estimate foraging areas; or (3) foraging areas with repeated use documented using acoustics. Documented roosting habitat is also considered as suitable summer habitat within 0.25 miles of documented roosts.)

[2] For the purposes of this key, we are considering documented corridors as that where Indiana bats and/or NLEB have actually been captured and tracked to using (1) radio telemetry; or (2) treed corridors located directly between documented roosting and foraging habitat.

No

17. Will the removal or trimming of habitat or trees occur **within** suitable but **undocumented NLEB** roosting/foraging habitat or travel corridors?

Yes

18. What time of year will the removal or trimming of habitat or trees **within** suitable but **undocumented NLEB** roosting/foraging habitat or travel corridors occur?

B) During the inactive season

19. Will *any* tree trimming or removal occur **within** 100 feet of existing road/rail surfaces?

Yes

20. Will the tree removal alter *any* **documented** Indiana bat or NLEB roosts and/or alter any surrounding summer habitat **within** 0.25 mile of a documented roost?

No

21. Will *any* tree trimming or removal occur **between** 100-300 feet of existing road/rail surfaces?

No

22. Are *all* trees that are being removed clearly demarcated?

Yes

23. Will the removal of habitat or the removal/trimming of trees include installing new or replacing existing **permanent** lighting?

No

24. Does the project include wetland or stream protection activities associated with compensatory wetland mitigation?

No

25. Does the project include slash pile burning?

No

26. Does the project include *any* bridge removal, replacement, and/or maintenance activities (e.g., any bridge repair, retrofit, maintenance, and/or rehabilitation work)?

Yes

27. Is there *any* suitable habitat^[1] for Indiana bat or NLEB **within** 1,000 feet of the bridge? (includes any trees suitable for maternity, roosting, foraging, or travelling habitat)

[1] See the Service's current [summer survey guidance](#) for our current definitions of suitable habitat.

Yes

28. Has a bridge assessment^[1] been conducted **within** the last 24 months^[2] to determine if the bridge is being used by bats?

[1] See [User Guide Appendix D](#) for bridge/structure assessment guidance

[2] Assessments must be completed no more than 2 years prior to conducting any work below the deck surface on all bridges that meet the physical characteristics described in the Programmatic Consultation, regardless of whether assessments have been conducted in the past. Due to the transitory nature of bat use, a negative result in one year does not guarantee that bats will not use that bridge/structure in subsequent years.

Yes

SUBMITTED DOCUMENTS

- [USFWS_BridgeStructureAssessmentForm_1600485.pdf](#) <https://ecos.fws.gov/ipac/project/BELH23CORRCHVCWP6WUPGZ7F3M/projectDocuments/20334741>

29. Did the bridge assessment detect *any* signs of Indiana bats and/or NLEBs roosting in/under the bridge (bats, guano, etc.)^[1]?

[1] If bridge assessment detects signs of *any* species of bats, coordination with the local FWS office is needed to identify potential threatened or endangered bat species. Additional studies may be undertaken to try to identify which bat species may be utilizing the bridge prior to allowing *any* work to proceed.

Note: There is a small chance bridge assessments for bat occupancy do not detect bats. Should a small number of bats be observed roosting on a bridge just prior to or during construction, such that take is likely to occur or does occur in the form of harassment, injury or death, the PBO requires the action agency to report the take. Report all unanticipated take within 2 working days of the incident to the USFWS. Construction activities may continue without delay provided the take is reported to the USFWS and is limited to 5 bats per project.

No

30. Will the bridge removal, replacement, and/or maintenance activities include installing new or replacing existing **permanent** lighting?

No

31. Does the project include the removal, replacement, and/or maintenance of *any* structure other than a bridge? (e.g., rest areas, offices, sheds, outbuildings, barns, parking garages, etc.)

No

32. Will the project involve the use of **temporary** lighting *during* the active season?

Yes

33. Is there *any* suitable habitat **within** 1,000 feet of the location(s) where **temporary** lighting will be used?

Yes

34. Will the project install new or replace existing **permanent** lighting?

No

35. Does the project include percussives or other activities (**not including tree removal/trimming or bridge/structure work**) that will increase noise levels above existing traffic/background levels?

No

36. Are *all* project activities that are **not associated with** habitat removal, tree removal/trimming, bridge and/or structure activities, temporary or permanent lighting, or use of percussives, limited to actions that DO NOT cause any additional stressors to the bat species?

Examples: lining roadways, unlighted signage , rail road crossing signals, signal lighting, and minor road repair such as asphalt fill of potholes, etc.

Yes

37. Will the project raise the road profile **above the tree canopy**?

No

38. Are the project activities that are not associated with habitat removal, tree removal/trimming, bridge and/or structure activities, temporary or permanent lighting, or use of percussives consistent with a No Effect determination in this key?

Automatically answered

Yes, other project activities are limited to actions that DO NOT cause any additional stressors to the bat species as described in the BA/BO

39. Is the habitat removal portion of this project consistent with a Not Likely to Adversely Affect determination in this key?

Automatically answered

Yes, because the tree removal/trimming that occurs outside of the Indiana bat's active season occurs greater than 0.5 miles from the nearest hibernaculum, is less than 100 feet from the existing road/rail surface, includes clear demarcation of the trees that are to be removed, and does not alter documented roosts and/or surrounding summer habitat within 0.25 miles of a documented roost.

40. Is the habitat removal portion of this project consistent with a Not Likely to Adversely Affect determination in this key?

Automatically answered

Yes, because the tree removal/trimming that occurs outside of the NLEB's active season occurs greater than 0.5 miles from the nearest hibernaculum, is less than 100 feet from the existing road/rail surface, includes clear demarcation of the trees that are to be removed, and does not alter documented roosts and/or surrounding summer habitat within 0.25 miles of a documented roost.

41. Is the bridge removal, replacement, or maintenance activities portion of this project consistent with a No Effect determination in this key?

Automatically answered

Yes, because the bridge has been assessed using the criteria documented in the BA and no signs of bats were detected

42. General AMM 1

Will the project ensure *all* operators, employees, and contractors working in areas of known or presumed bat habitat are aware of *all* FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable Avoidance and Minimization Measures?

Yes

43. Hibernacula AMM 1

Will the project ensure that on-site personnel will use best management practices^[1], secondary containment measures, or other standard spill prevention and countermeasures to avoid impacts to possible hibernacula?

[1] Coordinate with the appropriate Service Field Office on recommended best management practices for karst in your state.

Yes

44. Hibernacula AMM 1

Will the project ensure that, where practicable, a 300 foot buffer will be employed to separate fueling areas and other major containment risk activities from caves, sinkholes, losing streams, and springs in karst topography?

Yes

45. Tree Removal AMM 1

Can *all* phases/aspects of the project (e.g., temporary work areas, alignments) be modified, to the extent practicable, to avoid tree removal^[1] in excess of what is required to implement the project safely?

Note: Tree Removal AMM 1 is a minimization measure, the full implementation of which may not always be practicable. Projects may still be NLAA as long as Tree Removal AMMs 2, 3, and 4 are implemented and LAA as long as Tree Removal AMMs 3, 5, 6, and 7 are implemented.

[1] The word “trees” as used in the AMMs refers to trees that are suitable habitat for each species within their range. See the USFWS’ current summer survey guidance for our latest definitions of suitable habitat.

Yes

46. Tree Removal AMM 3

Can tree removal be limited to that specified in project plans and ensure that contractors understand clearing limits and how they are marked in the field (e.g., install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits)?

Yes

47. Tree Removal AMM 4

Can the project avoid cutting down/removal of *all* (1) **documented**^[1] Indiana bat or NLEB roosts^[2] (that are still suitable for roosting), (2) trees **within** 0.25 miles of roosts, and (3) documented foraging habitat any time of year?

[1] The word documented means habitat where bats have actually been captured and/or tracked.

[2] Documented roosting or foraging habitat – for the purposes of this consultation, we are considering documented habitat as that where Indiana bats and/or NLEB have actually been captured and tracked using (1) radio telemetry to roosts; (2) radio telemetry biangulation/triangulation to estimate foraging areas; or (3) foraging areas with repeated use documented using acoustics. Documented roosting habitat is also considered as suitable summer habitat within 0.25 miles of documented roosts.)

Yes

48. Lighting AMM 1

Will *all* **temporary** lighting be directed away from suitable habitat during the active season?

Yes

Project Questionnaire

1. Have you made a No Effect determination for *all* other species indicated on the FWS IPaC generated species list?

No

2. Have you made a May Affect determination for *any* other species on the FWS IPaC generated species list?

Yes

3. How many acres^[1] of trees are proposed for removal between 0-100 feet of the existing road/rail surface?

[1] If described as number of trees, multiply by 0.09 to convert to acreage and enter that number.

0.05

4. Please describe the proposed bridge work:

The proposed project involves replacing and widening the structure to accommodate 11ft. travel lanes and 2-4ft. paved shoulders with a 30 ft. span reinforced concrete slab structure, approximately 32 ft. in length.

5. Please state the timing of all proposed bridge work:

Spring of 2021

6. Please enter the date of the bridge assessment:

February 14, 2020

Avoidance And Minimization Measures (AMMs)

This determination key result includes the commitment to implement the following Avoidance and Minimization Measures (AMMs):

GENERAL AMM 1

Ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of all FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable AMMs.

HIBERNACULA AMM 1

For projects located within karst areas, on-site personnel will use best management practices, secondary containment measures, or other standard spill prevention and countermeasures to avoid impacts to possible hibernacula. Where practicable, a 300 foot buffer will be employed to separate fueling areas and other major containment risk activities from caves, sinkholes, losing streams, and springs in karst topography.

LIGHTING AMM 1

Direct temporary lighting away from suitable habitat during the active season.

TREE REMOVAL AMM 1

Modify all phases/aspects of the project (e.g., temporary work areas, alignments) to avoid tree removal.

TREE REMOVAL AMM 2

Apply time of year restrictions for tree removal when bats are not likely to be present, or limit tree removal to 10 or fewer trees per project at any time of year within 100 feet of existing road/rail surface and **outside of documented** roosting/foraging habitat or travel corridors; visual emergence survey must be conducted with no bats observed.

TREE REMOVAL AMM 3

Ensure tree removal is limited to that specified in project plans and ensure that contractors understand clearing limits and how they are marked in the field (e.g., install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits).

TREE REMOVAL AMM 4

Do not remove **documented** Indiana bat or NLEB roosts that are still suitable for roosting, or trees within 0.25 miles of roosts, or **documented** foraging habitat any time of year.

Determination Key Description: FHWA, FRA, FTA Programmatic Consultation For Transportation Projects Affecting NLEB Or Indiana Bat

This key was last updated in IPaC on December 02, 2019. Keys are subject to periodic revision.

This decision key is intended for projects/activities funded or authorized by the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), and/or Federal Transit Administration (FTA), which may require consultation with the U.S. Fish and Wildlife Service (Service) under Section 7 of the Endangered Species Act (ESA) for the endangered **Indiana bat** (*Myotis sodalis*) and the threatened **Northern long-eared bat** (NLEB) (*Myotis septentrionalis*).

This decision key should only be used to verify project applicability with the Service's [February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects](#). The programmatic biological opinion covers limited transportation activities that may affect either bat species, and addresses situations that are both likely and not likely to adversely affect either bat species. This decision key will assist in identifying the effect of a specific project/activity and applicability of the programmatic consultation. The programmatic biological opinion is not intended to cover all types of transportation actions. Activities outside the scope of the programmatic biological opinion, or that may affect ESA-listed species other than the Indiana bat or NLEB, or any designated critical habitat, may require additional ESA Section 7 consultation.

Raquel Walker

From: Dye, David <DDYE@indot.IN.gov>
Sent: Wednesday, March 4, 2020 1:25 PM
To: Harlan Ford
Cc: Raquel Walker; Hinkle, Meghan
Subject: RE: IPaC Review for Des No. 1600485: SR-11 over South Fork Buck Creek (GAI Project No. D170118.07)

EXTERNAL E-MAIL MESSAGE

I have reviewed and submitted this determination to USFWS for their 14-day review period.

Let me know if you have any additional questions.

David Dye

Environmental Section Manager

185 Agrico Lane

Seymour, IN 47274

Office: (812) 524-3723

Email: ddye@indot.in.gov



From: Harlan Ford <H.Ford@gaiconsultants.com>
Sent: Monday, February 17, 2020 12:44 PM
To: Dye, David <DDYE@indot.IN.gov>
Cc: Raquel Walker <R.Walker@gaiconsultants.com>; Hinkle, Meghan <MHinkle@indot.IN.gov>
Subject: FW: IPaC Review for Des No. 1600485: SR-11 over South Fork Buck Creek (GAI Project No. D170118.07)

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David,

I have revised the determination key to include a new bridge assessment form that was completed on February 14, 2020. Aside from that, I also revised the questionnaire to reflect the affect determination for the Grey Bat based on the conversation you and Meghan had with the USFWS.

The IPaC Record locator ID is: **022-20069847**. I have also attached the generated consistency letter for your reference as well.

Please let me know if you have any questions or need any additional information.

Thanks for your time,

Harlan M. Ford

D 317.436.9142 **M** 423.458.5979

From: Dye, David <DDYE@indot.IN.gov>
Sent: Thursday, February 13, 2020 2:49 PM
To: Harlan Ford
Cc: Hinkle, Meghan
Subject: FW: DES 1600485 and 1600486 Critical Habitat check

EXTERNAL E-MAIL MESSAGE

Hi Harlan,

Since IPaC showed these projects in a critical habitat, we coordinated with USFWS. Please see the emails below for information and recommendations. Let us know if you have any questions.

David Dye

Environmental Section Manager

185 Agrico Lane
Seymour, IN 47274

Office: (812) 524-3723

Email: ddye@indot.in.gov



From: McWilliams, Robin [mailto:robin_mcwilliams@fws.gov]
Sent: Thursday, February 13, 2020 10:10 AM
To: Hinkle, Meghan <MHinkle@indot.IN.gov>
Subject: Re: DES 1600485 and 1600486 Critical Habitat check

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Yes, sounds good.

Robin

Robin McWilliams Munson
Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
620 South Walker Street
Bloomington, IN 46142
812-334-4261

Mon-Tues 8-3:30p

Wed-Thurs 8:30-3p Telework

From: Hinkle, Meghan <MHinkle@indot.IN.gov>
Sent: Thursday, February 13, 2020 8:09 AM
To: McWilliams, Robin <robin_mcwilliams@fws.gov>
Cc: Dye, David <DDYE@indot.IN.gov>
Subject: [EXTERNAL] RE: DES 1600485 and 1600486 Critical Habitat check

Good Morning Robin,

Based on the RFI check one location has two sink hole locations over 0.4 mile from the project area, and the other location has one sink hole area 0.25 mile from the project area. Based on the RFI check, the 0.5 mile bat check, and your response we will make a NLAA determination for impacts to the grey bat. I will inform the consultant to add in erosion and sediment recommendations from the Interim Policy as firm commitments.

Does this sound appropriate for this project?

Meghan Hinkle
Major Projects / LPA Review Liaison
Environmental Services Division
Indiana Department of Transportation
100 N Senate Ave N642-ES
Indianapolis, IN 46204-2216
317-232-1490
Email: MHinkle@indot.IN.gov



From: McWilliams, Robin [mailto:robin_mcwilliams@fws.gov]
Sent: Wednesday, February 12, 2020 3:31 PM
To: Hinkle, Meghan <MHinkle@indot.IN.gov>
Subject: Re: DES 1600485 and 1600486 Critical Habitat check

**** This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email. ****

Hi Meghan,
both of these projects are outside of the buffer for the Critical Habitat; they are also just outside of the 10 mile radius of one of our Priority 2 hibernacula, so seasonal tree clearing will be from Oct. 1 through March 30. You do need to make a determination for the grey bat if it is listed on your T&E list. With seasonal clearing and appropriate measures to avoid and minimize impacts to the stream, such as erosion and sedimentation (which could affect aquatic insects/prey for grey bats), I believe you could reach a NLAA for the grey bat as well. Hope this answers you questions.

Robin

Robin McWilliams Munson
Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
620 South Walker Street
Bloomington, IN 46142
812-334-4261

Mon-Tues 8-3:30p
Wed-Thurs 8:30-3p Telework

From: Hinkle, Meghan <MHinkle@indot.IN.gov>
Sent: Monday, February 10, 2020 10:20 AM
To: McWilliams, Robin <robin_mcowilliams@fws.gov>
Subject: [EXTERNAL] DES 1600485 and 1600486 Critical Habitat check

Good Morning Robin,

Both of these projects are located in a critical habitat and the grey bat is included in the species list. These projects do not qualify for the USFWS Interim Policy. Could you check your records and see if any of the IPaC questions should be answered differently or tree clearing dates should be adjusted? Also is additional coordination needed for impacts to the grey bat? I have added you as a member to both IPaC projects.

DES 1600486 State Road 11 over South Fork Buck Creek: This project is located approximately 0.51 mile south of SR 211. The proposed project involves replacing and widening the structure to accommodate 11ft. travel lanes and 4ft. shoulders with a 38ft.- 9 in. span reinforced concrete slab structure, approximately 40 ft. in length. In addition, the vertical alignment of the roadway will be raised in order achieve hydraulic adequacy and riprap will be placed along the channel banks and footers for scour protection. Approximately 0.10 acre of trees/shrubs will need to be removed. Tree trimming and clearing will take place during the inactive season. A review of the USFWS database for bat hibernacula within 0.5 miles of the project did not indicate the presence of endangered bat species in or within the 0.5 miles search radius of the project area. No permanent lighting will be installed or replaced as part of this project; however, the use of temporary lighting may be needed. Construction for this project is expected to begin in Spring of 2021.

DES 1600485 State Road 11 over South Fork Buck Creek: This project is located at the SR 11 Bridge over South Fork Buck Creek, approximately 0.85 mile south of SR 211. The proposed project involves replacing and widening the structure to accommodate 11ft. travel lanes and 2-4ft. paved shoulders with a 30 ft. span reinforced concrete slab structure, approximately 32 ft. in length. Approximately 0.05 acre of tree trimming/clearing may be necessary to complete the project; however, tree trimming/clearing will be kept to the bare minimum. Tree trimming and clearing will take place during the inactive season. A review of the USFWS database for bat hibernacula within 0.5 miles of the project area was completed did not indicate the presence of endangered bat species in or within the 0.5 miles search radius of the

project area. No permanent lighting will be installed or replaced as part of this project; however, the use of temporary lighting may be needed. Approximately 0.539 acre of permanent ROW, and 0.012 acre of temporary ROW will be required for this project. Construction for this project is expected to begin in Spring of 2021.

Let me know if you have any questions or comments.

Thanks,

Meghan Hinkle
Major Projects / LPA Review Liaison
Environmental Services Division
Indiana Department of Transportation
100 N Senate Ave N642-ES
Indianapolis, IN 46204-2216
317-232-1490
Email: MHinkle@indot.IN.gov



To ensure that all NEPA documents are submitted appropriately in ERMS to the NEPA Document Review Unit, please be sure to include the following:

- The document type (CE/EA/EIS/PCE for ITS/Noise Analysis/ECF/AI/NTF/Bat Language) within the subject line and the body of the text.
- State in the body of the email who the document is intended for based on the CE Manual
 - PCE and State projects that are a CE-2 or lower to the appropriate district environmental supervisor/team lead
 - LPA and State projects that are a CE-3 and above or EA/EIS to the INDOT ESD Document Team Lead at Central Office.
 - Specify the name and email address of the recipient who should get the final document (e.g. Brandon Miller, NEPA Document Team Lead at Central Office; email: bramiller1@indot.in.gov)

APPENDIX D: Bridge/Structure Assessment Form

This form will be completed and submitted to the District Environmental Manager by the Contractor prior to conducting any work below the deck surface either from the underside; from activities above that bore down to the underside; from activities that could impact expansion joints; from deck removal on bridges; or from structure demolition for bridges/structures within 1000 feet of suitable bat habitat.

DOT Project #	Water Body	Date/Time of Inspection	Within 1,000ft of suitable bat habitat (circle one)
1600485	South Fork Buck Creek	2/14/2020: 10:00am	<div style="border: 1px solid red; padding: 2px; display: inline-block;">Yes</div> No

Route	County	Federal Structure ID
SR-11	Harrison	011-31-06119 (NBI: 003060)

If the bridge/structure is 1,000 feet or more from suitable bat habitat (e.g., an urban or agricultural area without suitable foraging habitat or corridors linking the bridge to suitable foraging habitat), check box and STOP HERE. No assessment required. ☐ Please submit to the U.S. Fish and Wildlife Service.

Areas Inspected (Check all that apply)

Bridges		Culverts/Other Structures		Summary Info (circle all that apply)			
All vertical crevices sealed at the top and 0.5-1.25" wide & ≥4" deep		Crevices, rough surfaces or imperfections in concrete	X	Human disturbance or traffic under bridge/in culvert or at the structure	High	Low	<div style="border: 1px solid red; padding: 2px; display: inline-block;">None</div>
All crevices >12" deep & not sealed		Spaces between walls, ceiling joists	N/A	Possible corridors for netting	<div style="border: 1px solid red; padding: 2px; display: inline-block;">None/poor</div>	Marginal	Excellent
All guardrails							
All expansion joints							
Spaces between concrete end walls and the bridge deck							


Last Revised May 31, 2017

Vertical surfaces on concrete Ibeams							
-----------------------------------------	--	--	--	--	--	--	--

Evidence of Bats (Circle all that apply) Presence of one or more indicators is sufficient evidence that bats may be using the structure.

None

Visual (e.g. survey, thermal, emergent etc.) Guano Staining definitively from bats
 • Live __ number seen Odor Y/N Photo documentation Y/N
 • Dead __ number seen Photo documentation Y/N
 Photo documentation Y/N
 Audible

Assessment Conducted By: <u>Harlan Ford</u> Signature(s): 
District Environmental Use Only: Date Received by District Environmental Manager: _____

DOT Bat Assessment Form Instructions

1. Assessments must be completed no more than 2 years prior to conducting any work below the deck surface on all bridges, regardless of whether assessments have been conducted in the past.
2. Any bridge/structure suspected of providing habitat for any species of bat will be removed from work schedules until such time that the DOT has coordinated with the USFWS. Additional studies may be undertaken by the DOT to determine what species may be utilizing each structure identified as supporting bats prior to allowing any work to proceed.
3. Any questions should be directed to the District Environmental Manager.

Appendix D

Section 106 Consultation

Item	Appendix Page
MPPA Determination Form	D1 to D5
INDOT CRO Correspondence	D6 to D7
Phase 1a Archaeological Report	D8 to D9

Minor Projects PA Project Assessment Form – Category B Projects with Archaeology Work

Date: 8/27/18 (Updated 2/7/20)

Project Designation Number: 1600485

Route Number: SR 11

Project Description: Bridge Replacement over S. Fork Buck Creek, 0.85 miles south of SR 211

The proposed project involves replacing and widening the bridge superstructure to accommodate a deck with two 12 ft. travel lanes and 8 ft. shoulders and replacing components of the substructure or replacing the structure with a three-sided or four-sided box structure. Riprap scour protection will be installed at the abutments.

On January 8th, 2020, INDOT-CRO received the following updated project information:

The Indiana Department of Transportation (INDOT) is proposing to replace the structure carrying State Road (SR) 11 over South Fork Buck Creek (Bridge No. 011-31-06119), located in Harrison County, Indiana. This project is located at the SR 11 Bridge over South Fork Buck Creek, approximately 0.85 mile south of SR 211, specifically located in Section 33 of Township 4 South, Range 5 East as shown on the Lanesville USGS 7.5 Minute Topographic Map. The existing structure is a 24 ft. single-span bridge constructed in 1966. SR 11 is functionally classified as a major collector, consisting of two 10 ft. travel lanes with 4ft. shoulders (1ft. paved) at the project location. Apparent existing Right-of-Way (ROW) extends approximately 30 ft. on either side of the centerline (60 ft. total). Additional ROW will be required, but it is unknown at this time how much. It is anticipated to require approximately 0.30 acre of permanent and 0.10 acre of temporary ROW. The proposed project involves replacing the structure with a three-span, 16 in. deep reinforced concrete slab bridge, approximately 63 ft. in length that will accommodate 11ft. travel lanes and 4ft. paved shoulders. In addition, new guardrail will be installed along SR-11. The vertical alignment of the roadway will be raised by approximately 3 ft. 6 in. to achieve hydraulic adequacy. Riprap will also be placed along the spill slopes and bridge cone as a scour countermeasure.

INDOT-CRO reviewed the updated project information and determined that the project continues to meet the conditions of the MPPA. See below for details.

Feature crossed (if applicable): S. Fork Buck Creek

Township: Posey

City/County: Harrison County

Information reviewed (please check all that apply):

☒ General project location map ☒ USGS map ☒ Aerial photograph ☐ Soil survey data

☒ Written description of project area ☒ General project area photos ☒ Interim Report

☐ Previously completed historic property reports ☒ Previously completed archaeology reports

☐ Bridge Inspection Information

Other (please specify): SHAARD GIS; INDOT Bridge Inspection Application System (BIAS); INDOT Historic Bridge Inventory (HBI); online street-view imagery; Harrison County property records (accessed via <https://harrisonin.elevatemaps.io/>)

Pugh-Rose, Susan and Jonathan Glenn
2018 SR 11 over South Fork Creek Bridge #6119 Replacement Project. Report on file, Indiana Department of Transportation, Cultural Resources Office, Indianapolis, In.

Bennett, Stacy and Jeffrey A. Plunkett
2020 Phase Ia Archaeological Field Reconnaissance on Additional Area for a Bridge Replacement on SR 11 Located 0.85 miles Southwest of SR 211 in Posey Civil Township, Harrison County, In.

Results of the Records Review for Above-Ground Resources:

With regard to above-ground resources, an INDOT Cultural Resources historian who meets the Secretary of the Interior's Professional Qualification Standards as per 36 CFR Part 61 performed a desktop review, checking the Indiana Register of Historic Sites and Structures (State Register) and National Register of Historic Places (National Register) lists for Harrison County. No listed resources are located near the project area.

The *Harrison County Interim Report* (1987; Posey Township Scattered Sites) of the Indiana Historic Sites and Structures Inventory (IHSSI) was also consulted. The National Register & IHSSI information is available in the Indiana State Historic Architectural and Archaeological Research Database (SHAARD), and the Indiana Historic Buildings, Bridges, and Cemeteries Map (IHBBCM). The SHAARD and IHBBCM information was checked against the Interim Report hard copy maps.

No IHSSI properties are located within 0.25 mile of the project area, a distance that would serve as a more-than-adequate area of potential effect (APE), given the project scope and surrounding terrain, which is partially wooded.

Land adjacent to the project area primarily consists of residential lawns. Two properties with aboveground resources are located adjacent to the project area, both of which are mid- to late-twentieth century ranch houses of a common type along with associated storage structures. None of the aboveground-resources adjacent to the project area possess the significance and integrity necessary to be considered potentially eligible for the National Register.

The subject structure (Bridge No. 011-31-06119, NBI No. 003060) is a concrete beam bridge, constructed in 1966. It was not included in INDOT's Historic Bridge Inventory due to its post-1965 construction date.

On November 2, 2012, the Advisory Council on Historic Preservation (ACHP) issued the Program Comment for Streamlining Section 106 Review for Actions Affecting Post-1945 Concrete and Steel Bridges (Program Comment). The Program Comment relieves federal agencies from the Section 106 requirement to consider the effects of undertakings on most concrete and steel bridges built after 1945. On March 19, 2013, federal agencies were approved to use the Program Comment for Indiana projects.

The Program Comment applies for Bridge No. 011-31-06119 because it has not been previously listed in or determined eligible for listing in the National Register of Historic Places and it is not located in or adjacent to a historic district (Section IV.A of the Program Comment). As an example of a post-1945 concrete beam bridge, the bridge is also not one of the types to which the Program Comment does not apply (arch bridges, truss bridges, bridges with movable spans, suspension bridges, cable-stayed bridges, or covered bridges [Section IV.B]).

Additionally, this bridge has not been identified as having exceptional significance for association with a person or event, being a very early or particularly important example of its type in the state or the nation, having distinctive engineering or architectural features that depart from standard designs, or displaying other elements that were engineered to respond to a unique environmental context (Section IV.C). The bridges also have not been identified as having some exceptional quality. Based on consultation between FHWA, INDOT, SHPO and interested parties, no bridges with exceptional significance were identified in Indiana (Section IV.C). Because the above criteria from the Program Comment have been met, no individual consideration under Section 106 is required for Bridge No. 011-31-06119.

Based on the available information, as summarized above, no aboveground concerns exist.

The INDOT-CRO historian reviewed the updated project information received on January 8th, 2020 and determined that the previous above-ground analysis remains valid

Archaeology Report Author/Date:

Susan Pugh-Rose and Jonathan Glenn/July 2, 2018

Stacy N. Bennett and Jeffery A. Plunkett/January 5, 2020

Summary of Archaeology Investigation Results:

An archaeological records check and Phase Ia field reconnaissance were conducted by GAI Consultants (Pugh-Rose and Glenn 2018). The records check identified no previously recorded sites within or adjacent to the project area, and found that no previous archaeological surveys had covered any portion of the proposed project area. A 0.6 acre survey area was examined through a combination of shovel probing and visual inspection of disturbed areas. A total of six shovel probes were excavated; all quadrants of the project area were sampled except the southeast quadrant which was too steep to warrant testing. No archaeological sites were identified and no further investigation was recommended.

An addendum archaeological records check and Phase ia field reconnaissance were conducted by NS Services (Bennett and Plunkett 2020). An additional 0.3 acres of proposed r/w was examined for archaeological resources through the excavation of six (6) shovel probes. No archaeological sites were identified and no further investigation was recommended.

Both reports were reviewed by INDOT Cultural Resources personnel who meet the Secretary of the Interior's Professional Qualification Standards as per 36 CFR Part 61. It is our opinion that the report is acceptable, and we concur with the evaluations and recommendations made by GAI Consultant (Pugh-Rose and Glenn 2018) and NS Services (Bennett and Plunkett 2020). Therefore, there are no archaeological concerns.

Does the project appear to fall under the Minor Projects PA? yes ☒ no ☐

If yes, please specify category and number (applicable conditions are highlighted**):**

A-9. Installation, repair, or replacement of erosion control measures along roadways, waterways and bridge piers within previously disturbed soils

B-4. Installation of new safety appurtenances, including but not limited to, guardrails, barriers, glare screens, and crash attenuators, under the following conditions ***[BOTH Condition A, which pertains to Archaeological Resources, and Condition B, which pertains to Above-Ground Resources, must be satisfied]***:

Condition A (Archaeological Resources)

One of the two conditions listed below must be met (*EITHER Condition i or Condition ii must be satisfied*):

- i. Work occurs in previously disturbed soils; *OR*
- ii. Work occurs in undisturbed soils and an archaeological investigation conducted by the applicant and reviewed by INDOT Cultural Resources Office determines that no National Register-listed or potentially National Register-eligible archaeological resources are present within the project area. If the archaeological investigation locates National Register-listed or potentially National Register-eligible archaeological resources, then full Section 106 review will be required. Copies of any archaeological reports prepared for the project will be provided to the DHPA and any archaeological site form information will be entered directly into the SHAARD by the applicant. The archaeological reports will also be available for viewing (by Tribes only) on INSCOPE.

Condition B (Above-Ground Resources)

Work does not occur adjacent to or within a National Register-listed or National Register-eligible district or individual above-ground resource.

B-12. Replacement, widening, or raising the elevation of the superstructure on existing bridges, and bridge replacement projects (when both the superstructure and substructure are removed), under the following conditions ***[BOTH Condition A, which pertains to Archaeological Resources, and Condition B, which pertains to Above-Ground Resources, must be satisfied]***:

Condition A (Archaeological Resources)

One of the two conditions listed below must be met (*EITHER Condition i or Condition ii must be satisfied*):

- i. Work occurs in previously disturbed soils; *OR*
- ii. Work occurs in undisturbed soils and an archaeological investigation conducted by the applicant and reviewed by INDOT Cultural Resources Office determines that no National Register-listed or potentially National Register-eligible archaeological resources are present within the project area. If the archaeological investigation locates National Register-listed or potentially National Register-eligible archaeological resources, then full Section 106 review will be required. Copies of any archaeological reports prepared for the project will be provided to the DHPA and any archaeological site form information will be entered directly into the SHAARD by the applicant. The archaeological reports will also be available for viewing (by Tribes only) on INSCOPE.

Condition B (Above-Ground Resources)

The conditions listed below must be met (***BOTH Condition i and Condition ii must be satisfied***)

- i. Work does not occur adjacent to or within a National Register-listed or National Register-eligible district or individual above-ground resource; *AND*
- ii. With regard to the subject bridge, at least one of the conditions listed below is satisfied (*AT LEAST one of the conditions a, b or c, must be fulfilled*):
 - a. The latest Historic Bridge Inventory identified the bridge as non-historic (see <http://www.in.gov/indot/2531.htm>);
 - b. The bridge was built after 1945, and is a common type as defined in Section V. of the *Program Comment Issued for Streamlining Section 106 Review for Actions Affecting Post-1945 Concrete and Steel Bridges* issued by the Advisory Council on Historic Preservation on November 2, 2012 for so long as that Program Comment remains in effect *AND* the considerations listed in Section IV of the Program Comment do not apply;
 - c. The bridge is part of the Interstate system and was determined not eligible for the National Register under the Section 106 Exemption Regarding Effects to the Interstate Highway System adopted by the Advisory Council on Historic Preservation on March 10, 2005, for so long as that Exemption remains in effect.

If no, please explain:

Additional comments: If any archaeological artifacts or human remains are uncovered during construction, demolition, or earth moving activities, construction in the immediate area of the find will be stopped, and the INDOT Cultural Resources Section and the Division of Historic Preservation and Archaeology will be notified immediately.

INDOT Cultural Resources staff reviewer(s): Anthony Ross and Shaun Miller

****Be sure to attach this form to the National Environmental Policy Act documentation for this project. Also, the NEPA documentation shall reference and include the description of the specific stipulation in the PA that qualifies the project as exempt from further Section 106 review.*

Raquel Walker

From: Miller, Shaun (INDOT) <smiller@indot.IN.gov>
Sent: Friday, February 7, 2020 2:35 PM
To: Harlan Ford
Cc: Ross, Anthony; Mankin, Travis; Dye, David
Subject: RE: MPPA Submittal for Des No. 1600485
Attachments: Minor Projects PA determination form_B-4_B-12_Des1600485_updated.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

EXTERNAL E-MAIL MESSAGE

Harlan,

Thank you for providing the addendum archaeology short report and supporting materials for our review of this project under the MPPA. We've determined that Categories B-4 and B-12 are still appropriate for this undertaking, thus concluding the Section 106 process. The updated determination form is attached for inclusion in the CE. Please be sure to include this version instead of the 2018 draft.

The archaeological report has been reviewed and approved by INDOT-CRO. Please forward one hard copy of the report to DHPA, indicating in the cover letter that the project qualified as a Minor Project and therefore the report is for their records only and no formal review is required under Section 106. In addition, we ask that a copy of the DHPA submittal letter be sent to INDOT CRO care of Shaun Miller during the time of submission and that the archaeological report be posted to IN SCOPE (please ensure that the uploaded file follows the IN SCOPE naming conventions).

Please keep in mind that if the scope of the project or project limits should change, our office will need to re-examine the information to determine whether the MPPA still applies. Please don't hesitate to contact us should you have any questions or need additional information.

Thanks again,

Shaun Miller
INDOT, Cultural Resources Office
Archaeology Team Lead
(317)233-6795

From: Harlan Ford [mailto:H.Ford@gaiconsultants.com]
Sent: Wednesday, January 8, 2020 3:07 PM
To: Branigin, Susan <SBranigin@indot.IN.gov>
Cc: Miller, Shaun (INDOT) <smiller@indot.IN.gov>; Kumar, Anuradha <akumar@indot.IN.gov>
Subject: MPPA Submittal for Des No. 1600485

**** This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email. ****

Good Evening Susan,

I am submitting a request to have the above mentioned project reviewed under Category B: Types B-4 & B-12 and Category A: Type A-4 & A-9. I have attached a shapefile for the project location, as well as some maps and photos for your convenience. As this project will take place in undisturbed soils, I have also attached the archaeological short report that was prepared for this project.

Please note that this project has been previously submitted and approved by INDOT. However, due to some scope changes this project is being-submitted to be re-evaluated under the MPPA and a new archaeological short report was prepared.

Please let me know if you need anything else!

Thanks for your time,

Harlan M. Ford

Environmental Specialist

GAI Consultants, 201 N. Illinois Street, Suite 1700, Indianapolis, IN 46204

T 317.570.6800 **D** 317.436.9142 **M** 423.458.5979

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GAI Consultants

ENGINEERING, PLANNING, AND ENVIRONMENTAL CONSULTING SINCE 1958

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INDIANA ARCHAEOLOGICAL SHORT REPORT

State Form 54566 (1-11)

INDIANA DEPARTMENT OF NATURAL RESOURCES DIVISION OF HISTORIC PRESERVATION AND ARCHAEOLOGY

402 West Washington Street, Room W274
Indianapolis, Indiana 46204-2739
Telephone Number: (317) 232-1646
Fax Number: (317) 232-0693
E-mail: dhpa@dnr.IN.gov

Where applicable, the use of this form is recommended but not required by the Division of Historic Preservation and Archaeology.

Author: Stacy N. Bennett and Jeffrey A. Plunkett

Date (month, day, year): January 5, 2020

Project Title: Phase Ia Archaeological Field Reconnaissance on Additional Area for a Bridge Replacement on SR 11 Located 0.85 miles Southwest of SR 211 in Posey Civil Township, Harrison County, Indiana.

PROJECT OVERVIEW

Project Description:

The Indiana Department of Transportation is proposing to replace the structure (Bridge #6119) carrying State Road 11 over South Fork Buck Creek, located in Harrison County, Indiana. The proposed project involves replacing and widening the bridge superstructure to accommodate a deck with two 12 foot travel lanes and 8 foot shoulders from the current 10 foot travel lanes with 1-2 foot shoulders as well as replacing elements of the substructure. The project is located 0.85 mile south of State Road 211.

INDOT Designation Number/ Contract Number: 1600485

Project Number: 19359

DHPA Number:

Approved DHPA Plan Number:

Prepared For: GAI Consultants

Contact Person: David Bourff

Address: 201 N. Illinois Street, Suite 1700

City: Indianapolis

State: IN

ZIP Code: 46204

Telephone Number: (317) 436-4841

Email Address: D.Bourff@gaiconsultants.com

Principal Investigator: Jeffrey A. Plunkett

Signature: Jeffrey Plunkett

Digitally signed by Jeffrey Plunkett
DN: cn=Jeffrey Plunkett, o=NS Services, LLC, ou, email=j.plunkett@nsevservices.com,
c=US
Date: 2020.01.05 20:59:47 -05'00'

Company/Institution: NS Services, LLC

Address: 4974 S. Cobblestone Drive

City: Zionsville

State: IN

ZIP Code: 46077

Telephone Number: (317) 773-2774

Email Address: j.plunkett@nsevservices.com

☐ Phase Ia reconnaissance has identified landforms conducive to buried archaeological deposits.

Actual Area Surveyed hectares: acres:

Comments:

Typical soil profiles in undisturbed portions of the project area consisted of approximately 30 cm. of brown (10YR4/3) silt loam over a dark yellowish brown (10YR4/6) silt loam excavated to a depth of 40 to 45 cm.

RECOMMENDATION

- ☐ The archaeological records check has determined that the project area has the potential to contain archaeological resources and a Phase Ia archaeological reconnaissance is recommended.
- ☐ The archaeological records check has determined that the project area does not have the potential to contain archaeological resources and no further work is recommended before the project is allowed to proceed.
- ☒ The Phase Ia archaeological reconnaissance has located no archaeological sites within the project area and it is recommended that the project be allowed to proceed as planned.

☐ The Phase Ia archaeological reconnaissance has determined that the project area includes landforms which have the potential to contain buried archaeological deposits. It is recommended that Phase Ic archaeological subsurface reconnaissance be conducted before the project is allowed to proceed.

☐ The Phase Ia archaeological reconnaissance has determined that the project area is within 100 feet of a cemetery and a Cemetery Development Plan is required per IC-14-21-1-26.5.

Cemetery Name:

Other Recommendations/Commitments:

Pursuant to IC-14-21-1, if any archaeological artifacts or human remains are uncovered during construction, demolition, or earthmoving activities, state law (Indiana Code 14-21-1-27 and 29) requires that the discovery must be reported to the Department of Natural Resources within two (2) business days. In that event, please call (317) 232-1646.

ATTACHMENTS

- ☒ Figure showing project location within Indiana.
- ☒ USGS topographic map showing the project area (*1:24,000 scale*).
- ☒ Aerial photograph showing the project area, land use, and survey methods.
- ☒ Photographs of the project area.
- ☐ Project plans (*if available*)

Other Attachments:

Table 1. Previous archaeological studies within one mile of the project.

Adderley, Anthony W.

2015 Short Report: Archaeological Literature Review and Field Reconnaissance, Proposed Elizabeth Access in Posey Township, Harrison County, Indiana. Project #7024.01.Hr. Access Cultural and Environmental Solutions, Indianapolis, Indiana. Prepared for Hoosier Energy Rural Electric Cooperative.

Baltz, Christopher J. and Cheryl Ann Munson

1985 An Archaeological Reconnaissance of the Proposed Elizabeth Waterworks Improvements in Harrison County, Indiana. Reports of Investigations 85-37. Glenn A. Black Laboratory of Archaeology, Indiana University, Bloomington, Indiana. Prepared for Robert E. Curry and Associates.

Appendix E

Red Flag and Hazardous Materials

Item	Appendix Page
Red Flag Investigation	E1 to E16
INDOT SAM Correspondence	E17 to E18



INDIANA DEPARTMENT OF TRANSPORTATION

Driving Indiana's Economic Growth

100 North Senate Avenue
Room N642
Indianapolis, Indiana 46204-2216 (317) 232-5348 FAX: (317) 233-4929

Eric Holcomb, Governor
Joe McGuinness, Commissioner

Date: August 13, 2018

To: Site Assessment & Management Unit
Environmental Services
Indiana Department of Transportation
100 N Senate Avenue, Room N642
Indianapolis, IN 46204

From: Paul Killian
GAI Consultants, Inc.
201 N. Illinois Street, Suite 1700
Indianapolis, IN 46204
p.killian@gaiconsultants.com

Re: RED FLAG INVESTIGATION
DES 1600485, State Project
Bridge Replacement Project
SR 11 over South Fork Buck Creek (Structure No. 011-31-06119)
Harrison County, Indiana

PROJECT DESCRIPTION

Brief Description of Project: The Indiana Department of Transportation (INDOT) is planning a bridge replacement project for the structure carrying State Road (SR) 11 over South Fork Buck Creek (Bridge No. 011-31-06119) located in Harrison County, Indiana. The project is located approximately 0.85 mile south of SR 211 in Section 33 of Township 4 South, Range 5 East as shown on the Lanesville USGS 7.5 Minute Topographic Map. The proposed project involves replacing and widening the bridge superstructure to accommodate a deck with two 12 ft. travel lanes and 8 ft. shoulders and replacing components of the substructure or replacing the structure with a three-sided or four-sided box structure. Scour protection is likely to be required at the abutments.

Bridge and/or Culvert Project: Yes ☒ No ☐ Structure # 011-31-06119

If this is a bridge project, is the bridge Historical? Yes ☐ No ☒ , Select ☐ Non-Select ☐

(Note: If the project involves a historical bridge, please include the bridge information in the Recommendations Section of the report).

Proposed right of way: Temporary ☒ # Acres 0.1 Permanent ☒ # Acres 0.03

Type of excavation: Excavation will be limited to within existing right-of-way. Excavation is anticipated to be to the full depth of the approaches, reshaping of the side slopes.

Maintenance of traffic: Traffic will be maintained through the use of road closure and an official detour route.

Work in waterway: Yes ☒ No ☐ Above ordinary high water mark: Yes ☐ No ☒

State Project: ☒ LPA: ☐

Any other factors influencing recommendations: N/A

INFRASTRUCTURE TABLE AND SUMMARY

Infrastructure Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Religious Facilities	N/A	Recreational Facilities	N/A
Airports ¹	N/A	Pipelines	1
Cemeteries	N/A	Railroads	N/A
Hospitals	N/A	Trails	N/A
Schools	N/A	Managed Lands	N/A

¹In order to complete the required airport review, a review of public airports within 3.8 miles (20,000 feet) is required.

Explanation:

Pipelines: One pipeline is located within the 0.5 mile search radius. The Indiana Utilities Corp. intrastate natural gas pipeline is located approximately 0.23 mile south of the project area. No impact is expected.

WATER RESOURCES TABLE AND SUMMARY

Water Resources Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
NWI - Points	N/A	Canal Routes - Historic	N/A
Karst Springs	N/A	NWI - Wetlands	9
Canal Structures – Historic	N/A	Lakes	7
NPS NRI Listed	N/A	Floodplain - DFIRM	1
NWI-Lines	3	Cave Entrance Density	N/A
IDEM 303d Listed Streams and Lakes (Impaired)	N/A	Sinkhole Areas	1
Rivers and Streams	5	Sinking-Stream Basins	N/A

Explanation:

NWI Wetlands: Nine NWI wetlands are located within the 0.5 mile search radius. The nearest NWI wetland is located 0.09 mile east of the project area. No impact is expected.

Lakes: Seven lakes are located within the 0.5 mile search radius. One lake feature is mapped 0.12 mile north of the project area. No impact is expected.

NWI Lines: Three NWI lines are located within the 0.5 mile search radius. These NWI lines are associated with South Fork Buck Creek, one of which intersects the project area. A Waters of the US Report will be prepared and coordination with INDOT ES Ecology and Waterway Permitting will occur.

Floodplains – DFIRM: One DFIRM floodplain polygon is located within the 0.5 mile search radius. Flood Zone A is located within the project area along the South Fork Buck Creek. Coordination with INDOT ES Ecology and Waterway Permitting will occur.

Rivers and Streams: Five streams are located within the 0.5 mile search radius. The nearest stream, South Fork Buck Creek (three segments), intersects the project area. A Waters of the US Report will be prepared and coordination with INDOT ES Ecology and Waterway Permitting will occur.

Sinkhole Areas: One sinkhole area is located within the 0.5 mile search radius. The sinkhole area is located approximately 0.26 mile south of the project area. No impact is expected.

URBANIZED AREA BOUNDARY SUMMARY

Explanation: N/A

MINING AND MINERAL EXPLORATION TABLE AND SUMMARY

Mining/Mineral Exploration Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Petroleum Wells	N/A	Mineral Resources	N/A
Mines – Surface	N/A	Mines – Underground	N/A

Explanation:

No Mining/Mineral Exploration resources are located within the 0.5 mile search radius.

HAZARDOUS MATERIAL CONCERNS TABLE AND SUMMARY

Hazardous Material Concerns Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Superfund	N/A	Manufactured Gas Plant Sites	N/A
RCRA Generator/ TSD	N/A	Open Dump Waste Sites	N/A
RCRA Corrective Action Sites	N/A	Restricted Waste Sites	N/A
State Cleanup Sites	N/A	Waste Transfer Stations	N/A
Septage Waste Sites	N/A	Tire Waste Sites	N/A
Underground Storage Tank (UST) Sites	N/A	Confined Feeding Operations (CFO)	N/A
Voluntary Remediation Program	N/A	Brownfields	N/A
Construction Demolition Waste	N/A	Institutional Controls	N/A
Solid Waste Landfill	N/A	NPDES Facilities	N/A
Infectious/Medical Waste Sites	N/A	NPDES Pipe Locations	N/A
Leaking Underground Storage (LUST) Sites	N/A	Notice of Contamination Sites	N/A

Explanation:

No Hazardous Material Concerns are located within the 0.5 mile search radius.

ECOLOGICAL INFORMATION SUMMARY

The Harrison County listing of the Indiana Natural Heritage Data Center information on endangered, threatened, or rare (ETR) species and high quality natural communities is attached with ETR species highlighted. A preliminary review of the Indiana Natural Heritage Database by INDOT Environmental Services did not indicate the presence of endangered species. Coordination with USFWS and IDNR will occur.

A review of the USFWS database did not indicate the presence of endangered bat species within 0.5 miles of the project area. The project is located near the town of Elizabeth in a primarily rural setting along a sparsely forested riparian corridor. The July 19, 2016 Inspection Report for Bridge #011-31-06119 contains no information about whether bats are present or absent on the bridge. Additional investigation to confirm the presence or absence of bats on the bridge will be necessary. The range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to "Using the USFWS's IPaC System for Listed Bat Consultation for INDOT Projects."

An inquiry into the USFWS IPaC website did not indicate the presence of the federally endangered species, the Rusty Patched Bumblebee, in or within 0.5 mile of the project area. No impact is expected.

RECOMMENDATIONS SECTION

Include recommendations from each section. If there are no recommendations, please indicate N/A:

INFRASTRUCTURE: N/A

WATER RESOURCES: The presence of the following water resources will require the preparation of a Waters of the U.S. Report and coordination with INDOT ES Ecology and Waterway Permitting:

1. One NWI line, associated with South Fork Buck Creek, intersects the project area.
2. Three stream segments associated with South Fork Buck Creek intersect the project area.
3. The project is located within a floodplain.

URBANIZED AREA BOUNDARY: N/A

MINING/MINERAL EXPLORATION: N/A

HAZMAT CONCERNS: N/A

ECOLOGICAL INFORMATION: Coordination with U.S. Fish and Wildlife Service and the Indiana Department of Natural Resources will be conducted. The range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to "Using the USFWS's IPaC System for Listed Bat Consultation for INDOT Projects."

INDOT Environmental Services concurrence:  Date: 2018.08.13 10:37:58 -04'00' (Signature)

Prepared by:



Paul Killian
Project Environmental Specialist
GAI Consultants, Inc.

Graphics:

A map for each report section with a 0.5 mile search radius buffer around all project area(s) showing all items identified as possible items of concern is attached. If there is not a section map included, please change the YES to N/A:

SITE LOCATION: YES

INFRASTRUCTURE: YES

WATER RESOURCES: YES

URBANIZED AREA BOUNDARY: N/A

MINING/MINERAL EXPLORATION: N/A

HAZMAT CONCERNS: N/A

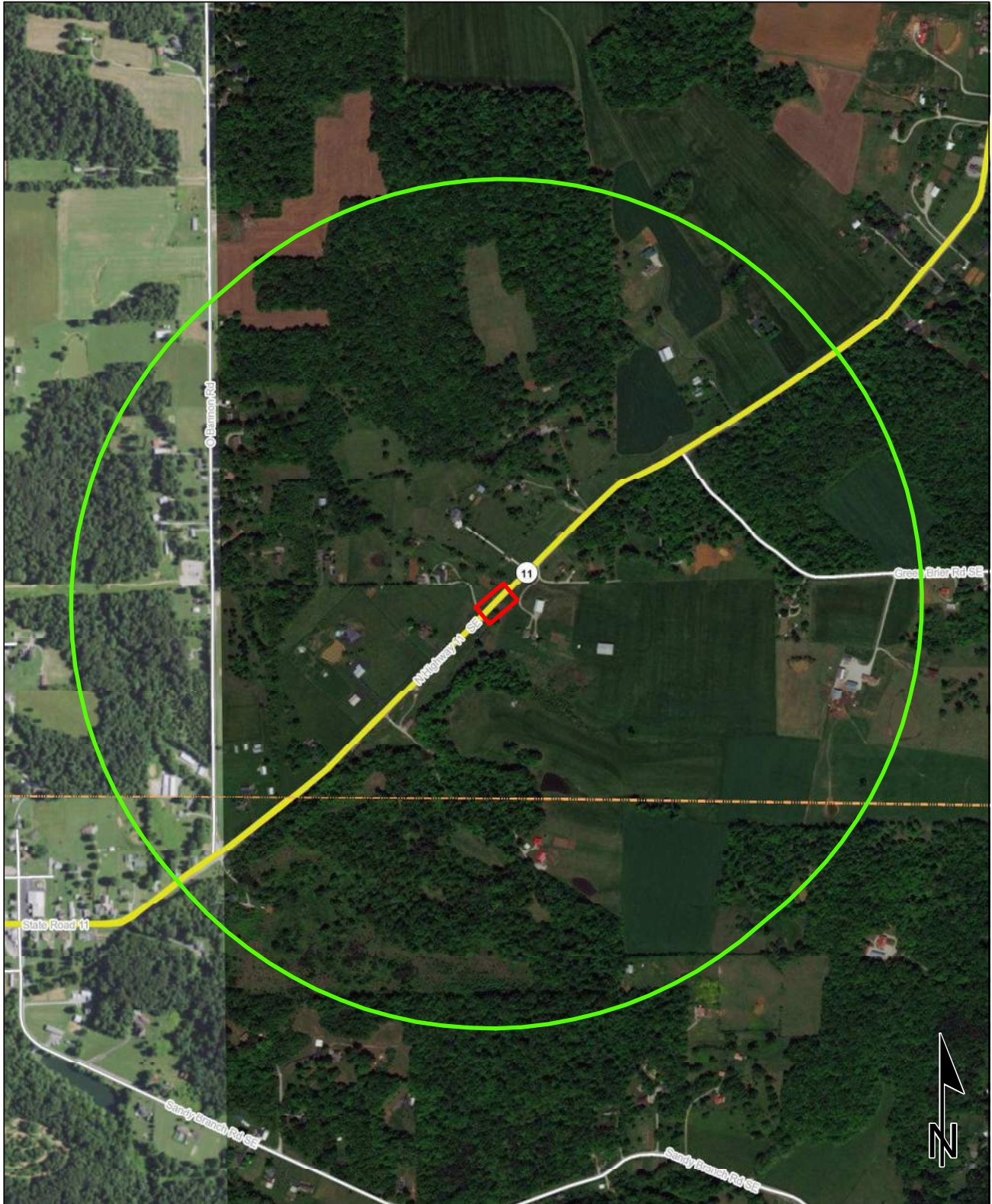
Red Flag Investigation - Site Location Map
 SR 11 over South Fork Buck Creek
 Des. No. 1600485, Bridge Replacement
 Harrison County, Indiana



Sources: 0.15 0.075 0 0.15 Miles
 Non Orthophotography
 Data - Obtained from the State of Indiana Geographical Information Office Library
 Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
 Map Projection: UTM Zone 16 N Map Datum: NAD83
 This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

LANESVILLE
 INDIANA QUADRANGLE
 7.5 MINUTE SERIES
 (TOPOGRAPHIC)

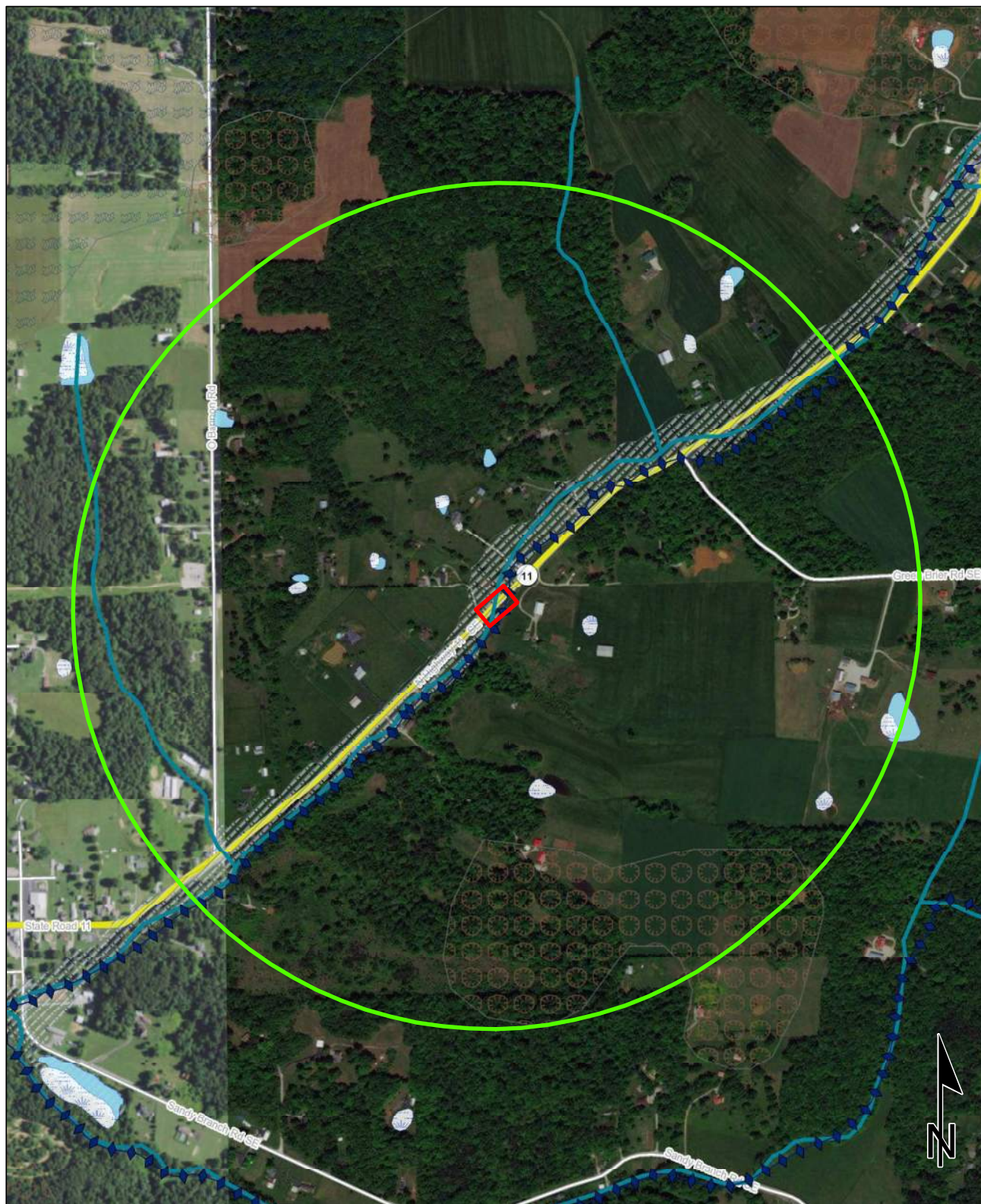
Red Flag Investigation - Infrastructure
 SR 11 over South Fork Buck Creek
 Des. No. 1600485, Bridge Replacement
 Harrison County, Indiana



Sources:
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 Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
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	Religious Facility		Recreation Facility		Project Area
	Religious Facility		Pipeline		Half Mile Radius
	Indiana Map		Railroad		Interstate
	Airport		Trails		State Route
	Cemeteries		Managed Lands		US Route
	Hospital		County Boundary		Local Road
	School				

Red Flag Investigation - Water Resources
 SR 11 over South Fork Buck Creek
 Des. No. 1600485, Bridge Replacement
 Harrison County, Indiana



Sources:

Non Orthophotography

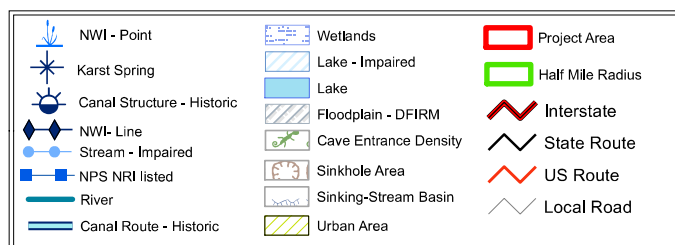
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0.15 0.075 0 0.15 Miles



Indiana County Endangered, Threatened and Rare Species List

County: Harrison

Species Name	Common Name	FED	STATE	GRANK	SRANK
Platyhelminthes (Flatworms)					
Sphalloplana weingartneri	Weingartner's Cave Flatworm		WL	G4	S3
Diplopoda					
Pseudotremia blacki	Black's Cave Milliped		SE	G1	S1
Pseudotremia burnorum	Burn's Cave Milliped		SE	G1G2	S1
Pseudotremia conservata	Tnc Cave Milliped		SE	G1G2	S1
Pseudotremia cookorum	Cook's Cave Milliped		SE	G1G2	S1
Pseudotremia indianae	Blue River Cave Milliped		WL	G4	S4
Pseudotremia purselli	Pursell's Cave Milliped		SE	G1	S1
Pseudotremia salisae	Salisa's Cave Milliped		SE	G1G2	S1
Scoterpes sollmani	Sollman's Cave Millipede			G1	S1
Crustacean: Malacostraca					
Caecidotea jordani	Jordan's groundwater isopod		SE	G2G3	S1
Crangonyx packardi	Packard's Cave Amphipod		WL	G4	S3
Miktoniscus barri	Barr's Terrestrial Isopod		WL	G2G4	SNR
Orconectes inermis inermis	A Troglobitic Crayfish		WL	G5T4	S3
Crustacean: Copepoda					
Diacyclops jeanneli	Jeannel's Cave Copepod		ST	G3G4	S2
Diacyclops yeatmani	Yeatman's groundwater isopod		SE	G2G3	S1
Crustacean: Ostracoda					
Sagittocythere barri	Barr's Commensal Cave Ostracod		WL	G5	S3S4
Mollusk: Bivalvia (Mussels)					
Cyprogenia stegaria	Eastern Fanshell Pearlymussel	LE	SE	G1Q	S1
Epioblasma triquetra	Snuffbox	LE	SE	G3	S1
Fusconaia subrotunda	Longsolid	C	SE	G3	SX
Lampsilis fasciola	Wavyrayed Lampmussel		SSC	G5	S3
Lampsilis ovata	Pocketbook			G5	S2
Ligumia recta	Black Sandshell			G4G5	S2
Obovaria retusa	Ring Pink	LE	SX	G1	SX
Obovaria subrotunda	Round Hickorynut	C	SE	G4	S1
Plethobasus cooperianus	Orangefoot Pimpleback	LE	SE	G1	SX
Plethobasus cyphus	Sheepnose	LE	SE	G3	S1
Pleurobema clava	Clubshell	LE	SE	G1G2	S1
Pleurobema coccineum	Round Pigtoe			G4G5	S3
Pleurobema cordatum	Ohio Pigtoe		SSC	G4	S2
Pleurobema pyramidatum	Pyramid Pigtoe		SE	G2G3	SX
Ptychobranchus fasciolaris	Kidneyshell		SSC	G4G5	S2
Simpsonia ambigua	Salamander Mussel	C	SSC	G3	S2
Villosa lienosa	Little Spectaclecase		SSC	G5	S3

Indiana Natural Heritage Data Center
Division of Nature Preserves
Indiana Department of Natural Resources
This data is not the result of comprehensive county surveys.

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GRANK: Global Heritage Rank: G1 = critically imperiled globally; G2 = imperiled globally; G3 = rare or uncommon globally; G4 = widespread and abundant globally but with long term concerns; G5 = widespread and abundant globally; G? = unranked; GX = extinct; Q = uncertain rank; T = taxonomic subunit rank
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Indiana County Endangered, Threatened and Rare Species List

County: Harrison

Species Name	Common Name	FED	STATE	GRANK	SRANK
Mollusk: Gastropoda					
Antroselatus spiralis	Shaggy Cave Snail		SR	G3	S3
Carychium riparium	Floodplain Thorn			G2	SNR
Fontigens cryptica	Hidden Springs Snail		SE	G1	S1
Glyphyalinia rimula	Tongued Glyph			G3	SNR
Zonitoides kirbyi	Shadow Gloss			G2	SNR
Ellipluran: Collembola					
Arrhopalites ater	Black Medusa Cave Springtail		ST	G2	S2
Arrhopalites lewisi	Lewis' Cave Springtail		ST	GNR	S2
Dicyrtoma flammea	Flaming Springtail		WL	GNR	SNR
Hypogastrura gibbosus	Humped Springtail		WL	GNR	SNR
Hypogastrura helena	Helen's Springtail		WL	GNR	SNR
Hypogastrura lucifuga	Wyandotte Cave Springtail		SE	GNR	S1
Hypogastrura maheuxi	Maheux Springtail		WL	GNR	SNR
Hypogastrura succinea	Girded Springtail		WL	GNR	SNR
Isotoma christianseni	Christiansen's Springtail		WL	GNR	S1
Isotomiella minor	Petit Springtail		WL	GNR	SNR
Onychiurus casus	Fallen Springtail		WL	GNR	S4
Onychiurus reluctus	A Springtail		WL	GNR	S4
Pseudosinella fonsa	Fountain Cave Springtail		ST	G3G4	S2
Sensillanura caeca	Blind Springtail		WL	GNR	SNR
Sinella alata	Springtail		WL	G5	S4
Sinella barri	Barr's Cave Springtail		SE	G5	S1
Sinella cavernarum	A Springtail		WL	G5	S3
Sminthurides hypogramme	springtail		WL	GNR	S1
Sminthurides weichseli	Weichsel's Springtail		WL	GNR	SNR
Tomocerus elongatus	Elongate Springtail		WL	GNR	SNR
Tomocerus lamelliferus	Layered Springtail		WL	GNR	SNR
Tomocerus missus	Relict Cave Springtail		WL	G4	S1
Insect: Coleoptera (Beetles)					
Aleochara lucifuga	Rove beetle		WL	GNR	S4
Atheta annexa	Rove beetle		WL	G4	S4
Pseudanophthalmus eremita	Cave Beetle		SE	G1G2	S1
Pseudanophthalmus tenuis	Cave Beetle		WL	G4	S4
Insect: Lepidoptera (Butterflies & Moths)					
Amblyscirtes hegon	Salt-and-pepper Skipper		SR	G5	S2
Amblyscirtes vialis	Common Roadside-skipper		SR	G5	S3
Artogeia virginiensis	West Virginia White		SR	G3?	S3
Calycopis cecrops	Red-banded Hairstreak		SR	G5	S2S3

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Indiana County Endangered, Threatened and Rare Species List

County: Harrison

Species Name	Common Name	FED	STATE	GRANK	SRANK
Catocala flebilis	The Black-dashed Underwing Moth		SR	G5	S1S3
Cyllopsis gemma	Gemmed Satyr		SR	G4G5	S2
Erynnis martialis	Mottled Duskywing		ST	G3	S2S3
Grammia figurata	The Figured Grammia		SR	G5	S2S3
Grammia phyllira	The Sand Barrens Grammia		SR	G4	S2S3
Hermeuptychia sosybius	Carolina Satyr		SR	G5	S1S2
Hesperia leonardus	Leonard's Skipper		SR	G5	S2
Hesperia metea	Cobweb Skipper		ST	G4	S2S3
Holomelina opella	The Smokey Holomelina		SR	G5	S2S3
Hyperaeschra georgica	A Prominent Moth			G5	S2
Lesmone detrahens	A Moth		SR	G5	S2
Leucania inermis	A Moth		SR	G5	S2S3
Paectes abrostolella	The Barrens Paectes Moth		SR	G4	S2S3
Pagara simplex	A Moth		SR	G5	S2S3
Pangrapta decoralis	The Multicolored Huckleberry Moth		ST	G5	S2
Papaipema astuta	The Stoneroot Borer Moth		ST	G2G4	S1S2
Papaipema polymniae	The Cup Plant Borer Moth		ST	G4?	S1S2
Tampa dimediatella	Red-striped Panic Grass Moth		ST	GNR	S2S3
Thorybes pylades	Northern Cloudywing		SR	G5	S2S3
Insect: Mecoptera					
Merope tuber	Earwig Scorpionfly		SE	G3G5	S1
Insect: Odonata (Dragonflies & Damselflies)					
Gomphus crassus	Handsome Clubtail		ST	G3G4	S2
Gomphus viridifrons	Green-faced Clubtail		ST	G3G4	S1S2
Hagenius brevistylus	Dragonhunter		SR	G5	S2S3
Neurocordulia molesta	Smoky Shadowdragon		SE	G4	S1
Neurocordulia yamaskanensis	Stygian Shadowfly		ST	G5	S1S2
Rhionaeschna mutata	Spatterdock Darner		ST	G4	S2S3
Stylogomphus sigmastylus	Least Clubtail		SE	G5	S1
Stylurus amnicola	Riverine Clubtail		ST	G4	S1S2
Stylurus notatus	Elusive Clubtail		SE	G3	S1
Insect: Orthoptera					
Melanoplus tepidus	The Fearful Barrens Locust		SR	GU	S1S3
Insect: Tricoptera (Caddisflies)					
Nectopsyche pavida	A Longhorned Casemaker Caddisfly		SR	G5	S2
Pycnopsyche rossi	A Northern Casemaker Caddisfly		SE	G3	S1

Arachnida

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Indiana County Endangered, Threatened and Rare Species List

County: Harrison

Species Name	Common Name	FED	STATE	GRANK	SRANK
<i>Calymmaria cavicola</i>	Cave Funnel-web Spider			GNR	S1
<i>Cicurina arcuata</i>	A Funnel-web Weaver			G5	S1
<i>Dolomedes scriptus</i>	Lined Nursery Web Spider			G5	S1?
<i>Hesperochnes mirabilis</i>	Southeastern Cave Pseudoscorpion		WL	G5	S4
Kleptochthonius packardi	Packard's Cave Pseudoscorpion		SE	G2G3	S2
<i>Nesticus carteri</i>	Carter's Cave Spider			GNR	S1
Fish					
Amblyopsis hoosieri	Hoosier cavefish	C	SE	G2	S1
<i>Esox masquinongy</i>	Ohio River Muskellunge		SSC	G5	S1
<i>Etheostoma maculatum</i>	Spotted Darter		SSC	G2G3	S2S3
Etheostoma variatum	Variegate Darter		SE	G5	S1
<i>Notropis ariommus</i>	Popeye Shiner			G3	SX
<i>Typhlichthys subterraneus</i>	Southern Cavefish			G4	SX
Amphibian					
Cryptobranchus alleganiensis alleganiensis	Eastern Hellbender	C	SE	G3G4T3T4	S1
<i>Necturus maculosus</i>	Common mudpuppy		SSC	G5	S2
Reptile					
Agkistrodon piscivorus leucostoma	Western Cottonmouth		SE	G5T5	S1
Clonophis kirtlandii	Kirtland's Snake	C	SE	G2	S2
Crotalus horridus	Timber Rattlesnake		SE	G4	S2
<i>Opheodrys aestivus</i>	Rough Green Snake		SSC	G5	S3
<i>Terrapene carolina carolina</i>	Eastern Box Turtle		SSC	G5T5	S3
Bird					
<i>Accipiter striatus</i>	Sharp-shinned Hawk		SSC	G5	S2B
<i>Aimophila aestivalis</i>	Bachman's Sparrow			G3	SXB
<i>Asio otus</i>	Long-eared Owl			G5	S2
<i>Buteo lineatus</i>	Red-shouldered Hawk		SSC	G5	S3
<i>Coragyps atratus</i>	Black Vulture			G5	S1N,S2B
<i>Falco peregrinus</i>	Peregrine Falcon		SSC	G4	S2B
<i>Haliaeetus leucocephalus</i>	Bald Eagle		SSC	G5	S2
<i>Helmitheros vermivorus</i>	Worm-eating Warbler		SSC	G5	S3B
Lanius ludovicianus	Loggerhead Shrike		SE	G4	S3B
Setophaga cerulea	Cerulean Warbler		SE	G4	S3B
<i>Wilsonia citrina</i>	Hooded Warbler		SSC	G5	S3B
Mammal					
Myotis grisescens	Gray Bat	LE	SE	G4	S1
<i>Myotis lucifugus</i>	Little Brown Bat	C	SSC	G3	S2
<i>Myotis septentrionalis</i>	Northern Long Eared Bat	LT	SSC	G1G2	S2S3
Myotis sodalis	Indiana Bat or Social Myotis	LE	SE	G2	S1

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Indiana County Endangered, Threatened and Rare Species List

County: Harrison

Species Name	Common Name	FED	STATE	GRANK	SRANK
Neotoma magister	Allegheny Woodrat		SE	G3G4	S2
Perimyotis subflavus	Tricolored Bat		SSC	G2G3	S2S3
Plecotus rafinesquii	Rafinesque's Big-eared Bat		SSC	G3G4	SH
Sorex hoyi	Pygmy Shrew		SSC	G5	S2
Vascular Plant					
Acalypha deamii	Mercury		SR	G4?	S2
Agalinis auriculata	Earleaf Foxglove		ST	G3	S1
Arabis patens	Spreading Rockcress		SE	G3	S1
Asclepias viridis	Green Milkweed		SE	G4G5	S1
Asplenium resiliens	Black-stem Spleenwort		SE	G5	S1
Asplenium ruta-muraria	Wallrue Spleenwort		SR	G5	S2
Bacopa rotundifolia	Roundleaf Water-hyssop		ST	G5	S1
Baptisia australis	Wild False Indigo		SR	G5	S2
Bumelia lycioides	Buckthorn		SE	G5	S1
Calamagrostis porteri ssp. insperata	Reed Bent Grass		ST	G4T3	S1
Carex crawei	Crawe Sedge		ST	G5	S2
Carex decomposita	Cypress-knee Sedge		ST	G3G4	S2
Carex eburnea	Ebony Sedge		SR	G5	S2
Carex gigantea	Large Sedge		ST	G4	S1
Carex straminea	Straw Sedge		ST	G5	S2
Ceanothus herbaceus	Prairie Redroot		SE	G5	S1
Chamaelirium luteum	Devil's-bit		SE	G5	S1
Cheilanthes lanosa	Hairy Lipfern		SR	G5	S2
Cimicifuga rubifolia	Appalachian Bugbane		SE	G3	S1
Clematis pitcheri	Pitcher Leather-flower		SR	G4G5	S2
Cornus amomum ssp. amomum	Silky Dogwood		SE	G5T5	S1
Cyperus acuminatus	Short-point Flatsedge		WL	G5	S3
Dicliptera brachiata	Wild Mudwort		SE	G5	S1
Diodia virginiana	Buttonweed		WL	G5	S2
Eupatorium album	White Thoroughwort		ST	G5	S1
Eupatorium incarnatum	Pink Thoroughwort		ST	G5	S2
Gaura filipes	Slender-stalked Gaura		ST	G5	S2
Gentiana alba	Yellow Gentian		SR	G4	S2
Gentiana puberulenta	Downy Gentian		ST	G4G5	S2
Gentiana villosa	Striped Gentian		SE	G4	S1
Glyceria acutiflora	Sharp-scaled Manna-grass		SE	G5	S1
Hedyotis nigricans	Narrowleaf Summer Bluets		SR	G5	S2
Heliotropium tenellum	Slender Heliotrope		ST	G5	S2
Hexalectris spicata	Crested Coralroot		SR	G5	S2
Hypericum denticulatum	Coppery St. John's-wort		ST	G5	S2

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Indiana County Endangered, Threatened and Rare Species List

County: Harrison

Species Name	Common Name	FED	STATE	GRANK	SRANK
<i>Hypericum dolabriforme</i>	Straggling St. John's-wort		SR	G4	S2
<i>Iresine rhizomatosa</i>	Eastern Bloodleaf		SR	G5	S2
<i>Isoetes engelmannii</i>	Appalachian Quillwort		SE	G4	S1
<i>Itea virginica</i>	Virginia Willow		SE	G4	S1
<i>Juglans cinerea</i>	Butternut		WL	G4	S3
<i>Lathyrus venosus</i>	Smooth Veiny Pea		ST	G5	S2
<i>Lechea racemulosa</i>	Illinois Pinweed		SE	G5	S1
<i>Ligusticum canadense</i>	Nondo Lovage		SE	G4	S1
<i>Lilium canadense</i>	Canada Lily		SR	G5	S2
<i>Linum sulcatum</i>	Grooved Yellow Flax		SR	G5	S2
<i>Magnolia acuminata</i>	Cucumber Magnolia		SE	G5	S1
<i>Matelea obliqua</i>	Angle Pod		SR	G4?	S2
<i>Melica nitens</i>	Three-flower Melic Grass		ST	G5	S2
<i>Melothria pendula</i>	Creeping Cucumber		SE	G5?	S1
<i>Muhlenbergia capillaris</i>	Long-awn Hairgrass		SE	G5	S1
<i>Najas gracillima</i>	Thread-like Naiad		ST	G5?	S1
<i>Nothoscordum bivalve</i>	Crow-poison		SR	G4	S2
<i>Ophioglossum engelmannii</i>	Limestone Adder's-tongue		SR	G5	S2
<i>Orobanche riparia</i>	Bottomland Broomrape		SE	G4?	S2
<i>Oryzopsis racemosa</i>	Black-fruit Mountain-ricegrass		SR	G5	S2
<i>Oxalis illinoensis</i>	Illinois Woodsorrel		WL	G4Q	S2
<i>Oxydendrum arboreum</i>	Sourwood		SR	G5	S2
<i>Pachysandra procumbens</i>	Allegheny Spurge		SE	G4G5	S1
<i>Panicum bicknellii</i>	A Panic-grass		SE	G4?Q	S1
<i>Passiflora incarnata</i>	Purple Passion-flower		SR	G5	S2
<i>Penstemon deamii</i>	Deam Beardtongue		SR	G1	S1
<i>Phlox amplifolia</i>	Large-leaved Phlox		SR	G3G5	S2
<i>Phlox bifida</i> ssp. <i>stellaria</i>	Cleft Phlox		SE	G5?T3	S1
<i>Pleopeltis polypodioides</i>	Resurrection Fern		SR	G5	S2
<i>Polygala incarnata</i>	Pink Milkwort		SE	G5	S1
<i>Polytaenia nuttallii</i>	Prairie Parsley		SE	G5	S1
<i>Prenanthes aspera</i>	Rough Rattlesnake-root		SR	G4?	S2
<i>Ranunculus pusillus</i>	Pursh Buttercup		SE	G5	S1
<i>Rhynchospora corniculata</i> var. <i>interior</i>	Short-bristle Horned-rush		ST	G5TNR	S2
<i>Rubus centralis</i>	Illinois Blackberry		SE	G2?Q	S1
<i>Rubus deamii</i>	Deam Dewberry		SX	G4?	SX
<i>Rudbeckia fulgida</i> var. <i>fulgida</i>	Orange Coneflower		WL	G5T4?	S2
<i>Rudbeckia fulgida</i> var. <i>umbrosa</i>	Coneflower		SE	G5T4T5	S1
<i>Sanicula smallii</i>	Small's Snakeroot		SR	G5	S2
<i>Satureja vulgaris</i> var. <i>neogaea</i>	American Wild Basil		WL	G5	S3

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Indiana County Endangered, Threatened and Rare Species List

County: Harrison

Species Name	Common Name	FED	STATE	GRANK	SRANK
<i>Saxifraga virginensis</i>	Virginia Saxifrage		WL	G5	S3
<i>Scutellaria parvula</i> var. <i>australis</i>	Southern Skullcap		WL	G4T4?	S2
<i>Sedum telephoides</i>	Allegheny Stonecrop		SR	G4	S2
<i>Selaginella apoda</i>	Meadow Spike-moss		WL	G5	S1
<i>Senna obtusifolia</i>	Blunt-leaf Senna		SR	G5	S2
<i>Solidago shortii</i>	Short's Goldenrod	LE	SE	G1	S1
<i>Sparganium angustifolium</i>	Branching Bur-reed		ST	G4G5	S2
<i>Spiranthes vernalis</i>	Grassleaf Ladies'-tresses		WL	G5	S2
<i>Stenanthium gramineum</i>	Eastern Featherbells		ST	G4G5	S1
<i>Strophostyles leiosperma</i>	Slick-seed Wild-bean		ST	G5	S2
<i>Symphotrichum oblongifolium</i>	Aromatic Aster		SR	G5	S2
<i>Thalictrum pubescens</i>	Tall Meadowrue		ST	G5	S2
<i>Tragia cordata</i>	Heart-leaved Noseburn		WL	G4	S2
<i>Trichostema dichotomum</i>	Forked Bluecurl		SR	G5	S2
<i>Uvularia perfoliata</i>	Bellwort		SE	G5	S1
<i>Valerianella chenopodiifolia</i>	Goose-foot Corn-salad		SE	G4	S1
<i>Viola egglesonii</i>	Eggleston's Violet		SE	G4	S1
<i>Vitis rupestris</i>	Sand Grape		SE	G3	S1
<i>Waldsteinia fragarioides</i>	Barren Strawberry		SR	G5	S2
<i>Wisteria macrostachya</i>	Kentucky Wisteria		SR	G5	S2
<i>Woodwardia areolata</i>	Netted Chainfern		SR	G5	S2
<i>Zizia aptera</i>	Golden Alexanders		SR	G5	S2
High Quality Natural Community					
Barrens - bedrock limestone	Limestone Glade		SG	G4	S2S3
Barrens - chert	Chert Barrens		SG	G2	S1
Forest - upland dry Shawnee Hills	Shawnee Hills Dry Upland Forest			GNR	S2
Forest - upland dry-mesic Highland Rim	Highland Rim Dry-mesic Upland Forest			GNR	S3
Forest - upland dry-mesic Shawnee Hills	Shawnee Hills Dry-mesic Upland Forest			GNR	S3
Forest - upland mesic Highland Rim	Highland Rim Mesic Upland Forest			GNR	S3
Forest - upland mesic Shawnee Hills	Shawnee Hills Mesic Upland Forest			GNR	S3
Lake - pond sinkhole	Sinkhole Pond		SG	GU	S1
Primary - cave terrestrial	Terrestrial Cave		SG	GNR	SNR
Primary - cliff limestone	Limestone Cliff		SG	GU	S1
Primary - cliff sandstone	Sandstone Cliff		SG	GU	S3
Primary - wash gravel	Gravel Wash		SG	GU	S1
Wetland - swamp sinkhole	Sinkhole Swamp		SG	G2?	S1

Other Significant Feature

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Indiana County Endangered, Threatened and Rare Species List

County: Harrison

Species Name	Common Name	FED	STATE	GRANK	SRANK
Freshwater Mussel Concentration Area	Mussel Bed		SG	G3	SNR
Geomorphic - Nonglacial Erosional Feature - Water Fall and Cascade	Water Fall and Cascade			GNR	SNR

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Fed:

State:

GRANK:

SRANK:

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From: Mathas, Marlene <MMathas@indot.IN.gov>
Sent: Wednesday, July 10, 2019 11:21 AM
To: Harlan Ford
Subject: RE: RFI Addendums for Des No. 1600486 and for Des No.1600485

EXTERNAL E-MAIL MESSAGE

Hi, Harlan –

If there are no substantive changes, then no, you don't need an Addendum. I would just make a note in the CE documents that RFI resources were reviewed again and no substantive changes were found.

Thanks!
Marlene

Marlene Mathas, CHMM
Site Assessment & Management (SAM) Team Lead
Environmental Policy Office
INDOT Environmental Services Division
(317) 232-5113

The Site Assessment and Management (SAM) Manual can be found at
<http://www.in.gov/indot/2523.htm>

Be sure to refer to the updated information in the SAM Manual for document preparation and submission.

From: Harlan Ford [<mailto:H.Ford@gaiconsultants.com>]
Sent: Wednesday, July 10, 2019 8:21 AM
To: Mathas, Marlene <MMathas@indot.IN.gov>
Subject: RFI Addendums for Des No. 1600486 and for Des No.1600485

**** This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email. ****

Good Morning Marlene,

We have two projects mentioned above that will be over a year old before we will be able to complete the environmental document.

Des No. 1600486: The RFI was initially approved on August 7, 2018

Des No. 1600485: The RFI was initially approved on August 13, 2018

I wanted to touch base with you and see how you wanted us to handle this. I have reviewed the RFI and there are no significant changes that would impact this project. I reviewed the Site Assessment&

Management Manual and it says to contact your office to determine if an Addendum should be generated. Upon review of GIS there are some new resources that are within the 0.5 mile search radius but none of which would impact the project. There has been no significant changes to the scope of the project. Both of these project still remain small structure replacement projects. This project was put on hold due to hydrology issues and is now back on track. I wasn't sure what all information you would want to see on the addendum or if you even wanted an addendum for these projects since no substantive changes have occurred within 0.5 mile radius and project area limits that will have an impact on the project.

Thank you for your time,

Harlan M. Ford

Environmental Specialist

GAI Consultants, 201 N. Illinois Street, Suite 1700, Indianapolis, IN 46204

T 317.570.6800 **D** 317.436.9142 **M** 423.458.5979

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Appendix F

Water Resources

Item	Appendix Page
Wetland Delineation and Stream Identification Report	F1 to F20
INDOT EWPO Approval Email	F21

Wetland Determination and Waters of the US Report

Indiana Department of Transportation (INDOT)
SR 11 over South Fork Buck Creek
Bridge Replacement Project
Des. No.: 1600485
Harrison County, Indiana

GAI Project Number: D170118.05

April 2018



Prepared by: GAI Consultants, Inc.
Indianapolis Office
201 N. Illinois Street, Suite 1700
Indianapolis, Indiana 46250

Prepared for: Indiana Department of Transportation
Seymour District
185 Agrico Lane
Seymour, IN 47274

Wetland Determination and Waters of the US Report

INDOT

SR 11 over South Fork Buck Creek

Bridge Replacement Project

Des. No.: 1600485

Harrison County, Indiana

GAI Project D170118.05

April 2018

Prepared for:

Indiana Department of Transportation (INDOT)

Seymour District

185 Agrico Lane

Seymour, IN 47274

Prepared by:

GAI Consultants, Inc.

Indianapolis Office

201 N. Illinois Street, Suite 1700

Indianapolis, IN 46204

Author:



Paul D. Killian

Project Environmental Specialist

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Table 1 NRCS Soils

Table 2 Waterbodies Identified Within the Project Study Area

Attachments

Duplicate figures and photos have been removed and are included in Appendix B.

Project Figures

~~Figure 1 State Location Map~~

~~Figure 2 USGS Topo Map~~

~~Figure 3 Aerial Location Map~~

Figure 4 NWI Wetlands Map

Figure 5 NRCS Soils Map

Figure 6 FEMA Floodzone Map

Figure 7 Waters of the US Investigation Map

~~Figure 8 Photo Location Map~~

~~Photographs~~

Preliminary Jurisdictional Determination Form

1.0 Introduction

The Indiana Department of Transportation (INDOT) is proposing to replace the structure carrying State Road (SR) 11 over South Fork Buck Creek, located in Harrison County, Indiana (Figure 3). The proposed project involves replacing and widening the bridge superstructure to accommodate a deck with two 12 ft. travel lanes and 8 ft. shoulders from the current 10 ft. travel lanes with 1-2 ft. shoulders, as well as replacing elements of the substructure. The project is located 0.85 mile south of SR 211 in Section 33 of Township 4 South, Range 5 East as shown on the Lanesville USGS 7.5 Minute Topographic Map.

GAI Consultants, Inc. (GAI), on behalf of INDOT, conducted wetland delineations and waterbody investigations of the project study area on September 19, 2017. GAI identified approximate boundaries of waterbodies and wetlands located within the project study area. This study area was determined in the field by GAI based upon likely work areas and impacts to regulated "Waters of the United States" as a result of construction activities. This report describes the methods and results of the environmental field survey.

2.0 Methods

Wetland delineations were conducted in accordance with the 1987 United States Army Corps of Engineers (USACE) *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory, 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains Piedmont Region* (Version 2.0) (USACE, 2010). Wetlands were classified using the *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al., 1979). Classification of the indicator status of vegetation is based on *The National Wetland Plant List: 2016 wetland ratings* (Lichvar et al. 2016).

The USACE will assert jurisdiction over traditionally navigable waters (TNW), adjacent wetlands, and non-navigable tributaries of TNW that have "relatively permanent" flow, and wetlands that border these waters, regardless of whether or not they are separated by roads, berms, and similar barriers. The USACE will use a case-by-case "significant nexus" analysis to determine whether waters and their adjacent wetlands are jurisdictional. A "significant nexus" can be found where waters, including adjacent wetlands, alter the physical, biological, or chemical integrity of the TNW based on consideration of several factors.

Each wetland and waterbody feature was given a unique map designation and each boundary flag location was recorded using a Trimble GEO XH model global positioning system mapping grade unit with the capability of sub-meter accuracy. Judgmental upland and wetland soil test pits were taken within the study corridor at the discretion of the delineator to confirm the presence or absence of wetlands in areas with exhibiting wetland indicators. Wetland boundaries and other waterbody centerlines and/or perimeters were mapped including ordinary high water mark (OHWM) and top-of-bank (TOB). Waterbody data collected included general morphological characteristics, flow regime, substrate, jurisdictional connection and significant nexus determination.

3.0 Background Information

Prior to the fieldwork, background information and existing mapping was reviewed to establish the probability and potential location of wetlands on the site. Available information from government agency documents and private sources were collected and reviewed in order to characterize the project area, as well as identify potential wetlands and other regulated features located within the project study area.

The growing season in the project area is generally between April and October in Harrison County, Indiana [United States Department of Agriculture, Natural Resource Conservation Service (USDA-NRCS)] (USDA-NRCS, 2016). Field observations were supplemented with an intensive review of United States

Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) mapping, USDA soils mapping, historical aerial photography (ArcGIS and Google Earth), and local landscape topography/morphology.

The project study area topography is mostly flat, with elevations ranging from 730 to 740 ft. Drainage patterns were identified via topographic elevation contours to drain towards South Fork Buck Creek. The project study area is within the Mitchell Plateau physiographic region of the Southern Hills and Lowlands Region (Gray, 2000). The Mitchell Plateau is described as a broad carbonate karst plateau dissected by a few major stream systems. Land use in the vicinity of the project is primarily rural residential and agriculture.

3.1 National Wetland Inventory

The USFWS' NWI Wetlands Mapper was reviewed for potential wetland locations. These maps identify potential wetlands onsite. The NWI maps were prepared from high altitude photography and in most cases were not field verified. As a result, wetlands are sometimes erroneously identified, missed, or misidentified within this data set. The presence of an NWI wetland does not necessarily constitute the presence of a wetland meeting USACE criteria. The NWI data of the area (Figure 4) identified two NWI wetlands intersecting the project area along West Fork Buck Creek. The NWI areas (R5UBH and R4SBCx) are riverine wetlands within the project area.

3.2 Watersheds

The project study area is found within the South Fork Buck Creek, 14-digit Hydrologic Unit Code (HUC14) 05140104050040.

3.3 NRCS Soil Survey

The NRCS Soil Survey of Harrison County identified two soil series within the project study area (Figure 5). Neither of the soils were identified as hydric soils (Table 1).

Table 1. NRCS Soil Survey Area of Interest Results

Map Unit Name (Map Symbol)	Drainage Properties	Hydrology	Hydric Status
Caneyville-Rock Outcrop Complex, 25-60% slopes (CcaG)	Well Drained	No Flooding, No Ponding	Not Hydric
Kintner Loam, 1-3% Slopes (KunAW)	Moderately Well Drained	Occasional Flooding, No Ponding	Not Hydric

3.4 Federal Emergency Management Agency Floodplain Insurance Rate Maps

A review of the Federal Emergency Management Agency (FEMA) Floodplain Insurance Rate Maps (FIRM, Panels 18043C0165E and 18061C0265D) revealed that the project study lies within Zone A (Figure 6). FEMA defines Flood Zone A as areas subject to inundation by the 1-percent-annual-chance flood event generally determined using approximate methods. Because detailed hydraulic analyses have not been performed, no Base Flood Elevations (BFEs) or flood depths are shown. Floodplain management standards apply.

4.0 Results

One likely jurisdictional stream was identified within the study area (Figure 7).

4.1 Waterbodies

Detailed descriptions of the delineated streams and other waterbodies are discussed below. Stream features and other waterbodies are described by morphological characteristics, flow regime, substrate, jurisdictional connection and significant nexus determination. Waterbodies identified within the project study area are represented in Table 2.

The identified stream feature is not State Waters Designated for Special Protection in Indiana (Designated Salmonid Waters, Outstanding State Resource Waters, or Exceptional Use Streams). The identified stream feature is not on the Indiana Department of Natural Resources Listing of State Natural and Scenic Rivers. The identified stream is not listed on Indiana Department of Natural Resources for Outstanding Rivers in Indiana. The stream is not a USACE Section 10 Waters listed as navigable. South Fork Buck Creek is a tributary to Buck Creek, which is a State Heritage Program Site, identified as having outstanding ecological importance, from the headwaters to the confluence with the Ohio River.

South Fork Buck Creek (approximately 221 feet onsite)

South Fork Buck Creek is a perennial, USGS Blue Line Stream, and Relatively Permanent Waterbody (RPW) that should be considered a "Waters of the United States." The upstream drainage area is 3.44 miles. South Fork Buck Creek flows northeast to southwest through the project area. South Fork Buck Creek is a channelized stream with a substrate comprised primarily of cobble and silt. South Fork Buck Creek has a defined bed, bank, and OHWM. The OHWM is 6 ft. wide and 8 inches deep, with riffle and pool complexes that add variation to the OHWM width and depth. The riparian zone is mostly mowed lawn (*Festuca rubra*, FACU, *Poa pratensis*, FAC, *Paspalum spp.*, and *Trifolium pretense*, FACU/*repens* FACU), with scattered Callery pear (*Pyrus calleryana*, unclassified), boxelder (*Acer negundo*, FAC), black walnut (*Juglans nigra* FACU), and American sycamore (*Platanus occidentalis*, FACW). To the south of the bridge a riparian zone from the OHWM to the top of bank (approximately 15 ft.) was comprised of a more diverse assemblage of early successional and herbaceous vegetation, including jewel weed (*Impatiens capensis*, FACW), rough leaf goldenrod (*Solidago rugose*, FAC), beggartick (*Bidens frondosa*, FACW), boneset (*Eupatorium perfoliatum*, FACW), rice cut grass (*Leersia oryzoides*, OBL), smart weed (*Polygonum hydropiperoides*, OBL and *Polygonum persicaria*, FACW), reed canary grass (*Phalaris arundinacea*, FACW), and honey suckle (*Lonicera maackii*, FAC). South Fork Buck Creek discharges to Buck Creek (RPW), which discharges to the Ohio River (RPW and TNW).

4.2 Wetlands

No wetland features that appeared to meet all three USACE wetland criteria were observed within the project boundary. The prevalence of hydrophytic vegetation along the banks of South Fork Buck Creek was determined to be an indication of hydrogeomorphology and slope position. The more hydrophytic species, such as smart weed, rice cutgrass, boneset, jewelweed, and beggartick, were distributed close to the OHWM and to within small in-stream deposition islands that would remain inundated throughout the growing season. There was a clear precipitous drop in the abundance of these species further up the banks, where less hydrophytic vegetation became dominant. This characteristic change indicates the hydrologic regime of the stream fluctuates throughout the year in response to rain events, with a sufficient hydroperiod to propagate hydrophytic vegetation, but is not sufficient to develop other wetland characteristics (i.e., hydric soils). Since hydrophytic vegetation was constrained to the banks of the stream and became progressively mesophytic from the OHWM outward, it was determined that the hydroperiod was not likely sufficient to produce hydric soils and therefore no soil pits were excavated.

4.3 Roadside Ditches and Other Drainages

All roadside ditches and other surface drainages within the study area were also evaluated for consideration as jurisdictional "Waters of the United States" with respect to the Clean Water Act Rule [40 CFR 230.3(3)(iii)]. Jurisdictional ditches must meet the definition of tributary, have an OHWM, and flow directly or indirectly through another water to a TNW. Likely jurisdictional ditches include: ditches with perennial flow; ditches with intermittent flow that drain wetlands; or ditches, regardless of flow, that are excavated in or relocate a tributary. Jurisdictional wetlands may be present within, or connected to another jurisdictional "Waters of the United States" in regard to significant nexus analysis through, non-jurisdictional ditches or surface drainages.

Roadside ditches were observed within the study area, however, none of the roadside ditches or other drainages would be considered jurisdictional or likely jurisdictional within the study area as these features were excavated in upland soils to convey upland drainage.

5.0 Conclusions

Wetland delineations and stream investigations for the SR 11 over South Fork Buck Creek bridge replacement project were conducted on September 19, 2017. One likely jurisdictional stream was identified within the study area. No wetlands were delineated within the study area.

All statements in this document pertaining to the jurisdictional status of streams and wetlands with regard to USACE and state regulations represent the opinion of GAI and are based on present USACE guidance. The jurisdictional status of these features may be confirmed a USACE Jurisdictional Determination and/or by state agencies. Every effort should be taken to avoid and minimize impacts to the resources outlined in this report. If impacts are necessary, then mitigation may be required.

6.0 References

- Cowardin, D.M., Carter, V., Golet, F.C., and La Roe, E.T. 1979. *Classification of Wetlands and Deepwater Habitats of the United States*. Publication No. FWS/OBS-79/31. United States Department of the Interior, Fish and Wildlife Service, Washington, D.C.
- Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual*. Technical Report Y-87-1. United States Department of the Army, United States Army Engineer Waterways Experiment Station, Vicksburg, Mississippi.
- Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. *The National Wetland Plant List: 2016 wetland ratings*. Phytoneuron 2016-30: 1-17. Published 28 April 2016. ISSN 2153 733X.
- United States Army Corps of Engineers (USACE). 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains Piedmont Region, Version 2.0*. ERDC/EL TR-12.1. United States Army Engineer Research and Development Center, Vicksburg, Mississippi.
- United States Department of Agriculture, Natural Resources Conservation Service (USDA-NRCS). 2017. *Field Office Technical Guide, WETS Climatic Data for Harrison County, IND*. Available at <http://efotg.sc.egov.usda.gov/treemenuFS.aspx>. Accessed August 2017.
- United States Department of Agriculture, Natural Resources Conservation Service (USDA-NRCS). 2006. *Land Resource Regions and Major Land Resource Areas of the United States, the Caribbean, and the Pacific*. U.S. Department of Agriculture Handbook, 296.

Table 2
Waterbody Identified within the Project Study Area

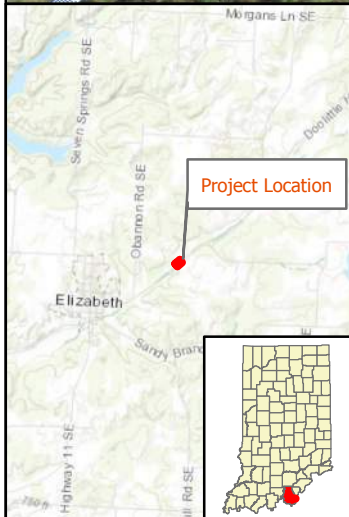
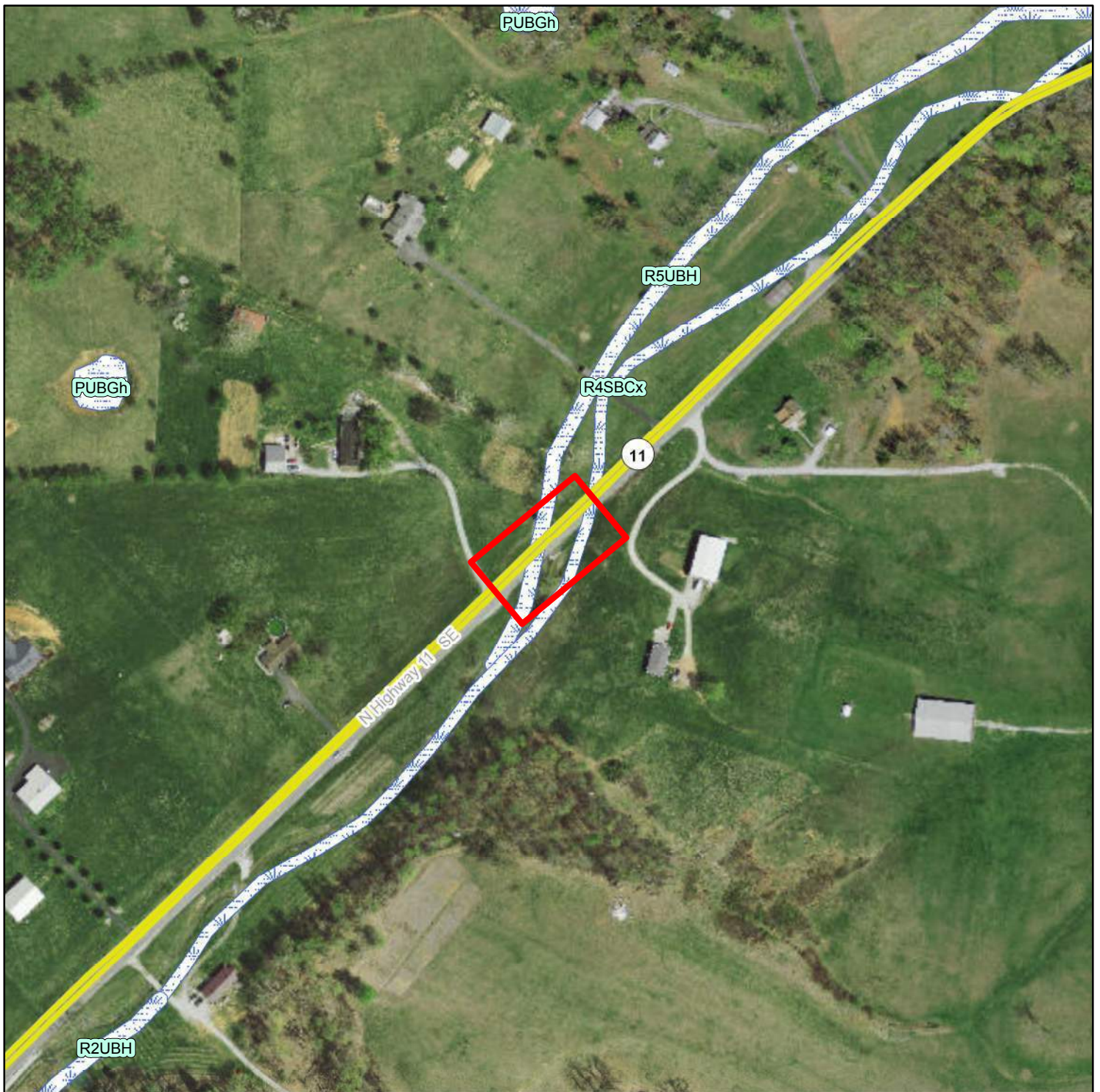
Feature Name	Photo No.	Latitude, Longitude ¹	Type	OHWM Width (ft)	OHWM Depth (ft)	TOB Width (ft)	TOB Depth (ft)	Length or Acres Within Study Area ²	USGS Blue-Line Stream	Riffles and Pools	Quality	"Waters of the US"	Indiana or Federal Special Listing ^{3,4,5,6,7,8}	Open Ended ²
South Fork Buck Creek	5-11	38.126938°, -85.961078°	Per.	6	0.67	22	4	221	Yes	Yes	Good	Yes	No	Yes

Notes:

- ¹ Decimal degrees; Coordinates provided in NAD 83.
- ² Extent of stream or open water within study area. Stream or open water may extend beyond these limits if noted as open ended.
- ³ U.S. Army Corps of Engineers Navigable Streams in Indiana Listing (Section 10 Waters) Louisville and Detroit Districts.
- ⁴ Indiana Department of Natural Resources Listing of State Natural and Scenic Rivers. Rev. 1996. Accessed August 2016.
- ⁵ Indiana Department of Natural Resources Outstanding Rivers List for Indiana. Indiana Register. Information Bulletin #4. June 4, 2013. Accessed August 2016.
- ⁶ Indiana Department of Natural Resources Listing of Public Freshwater Lakes. Information Bulletin #61. October 1, 2010. Accessed August 2016.
- ⁷ State Waters Designated for Special Protection in Indiana (Designated Salmonid Waters, Outstanding State Resource Waters, or Exceptional Use Streams).
- ⁸ Indiana Department of Natural Resources Navigable Waterways Roster.

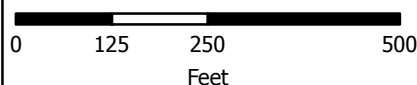
Project Figures

Duplicate Figures have been removed and are included in Appendix B.



NWI Wetlands Map

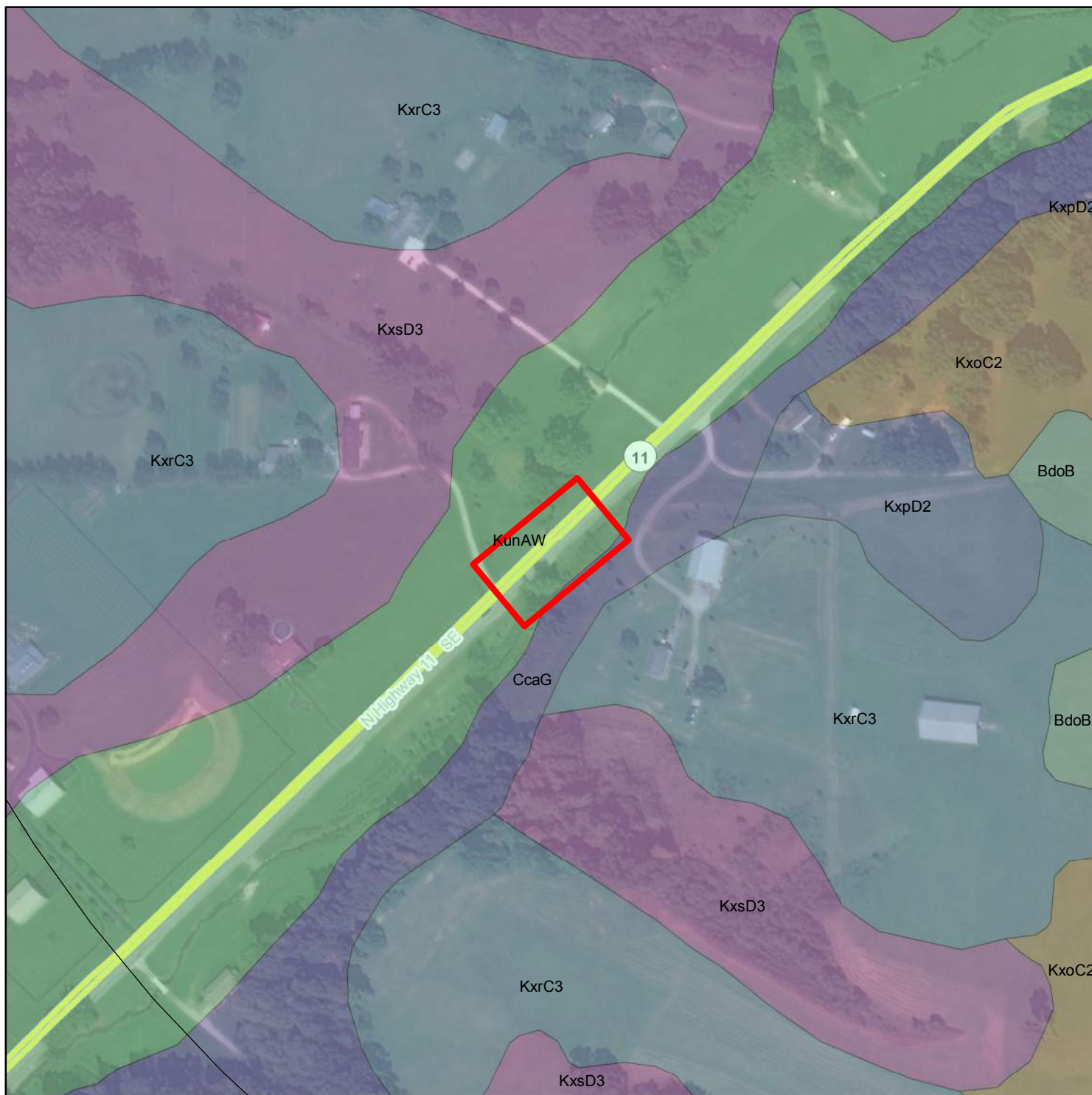
**SR 11 over South Fork Buck Creek
Bridge Replacement
Harrison County, Indiana
Des 1600485**



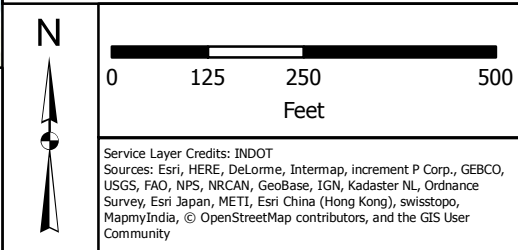
Service Layer Credits: INDOT
Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community
Indiana Spatial Data Portal, UITS, ESRI

Legend

- | | | |
|----------------------|--------------------|-------------|
| Study Area | Surface Drainage | Interstate |
| Delineated Stream | Delineated Wetland | US Roads |
| Encapsulated Stream | Wetland Open End | State Roads |
| Photo Location Point | NWI Wetland | Local Roads |
| Upland Data Point | Contours | Railroad |
| Wetland Data Point | | |

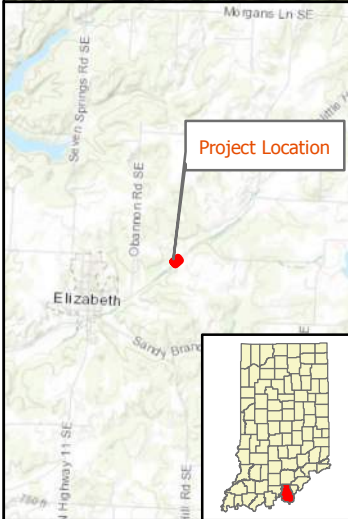
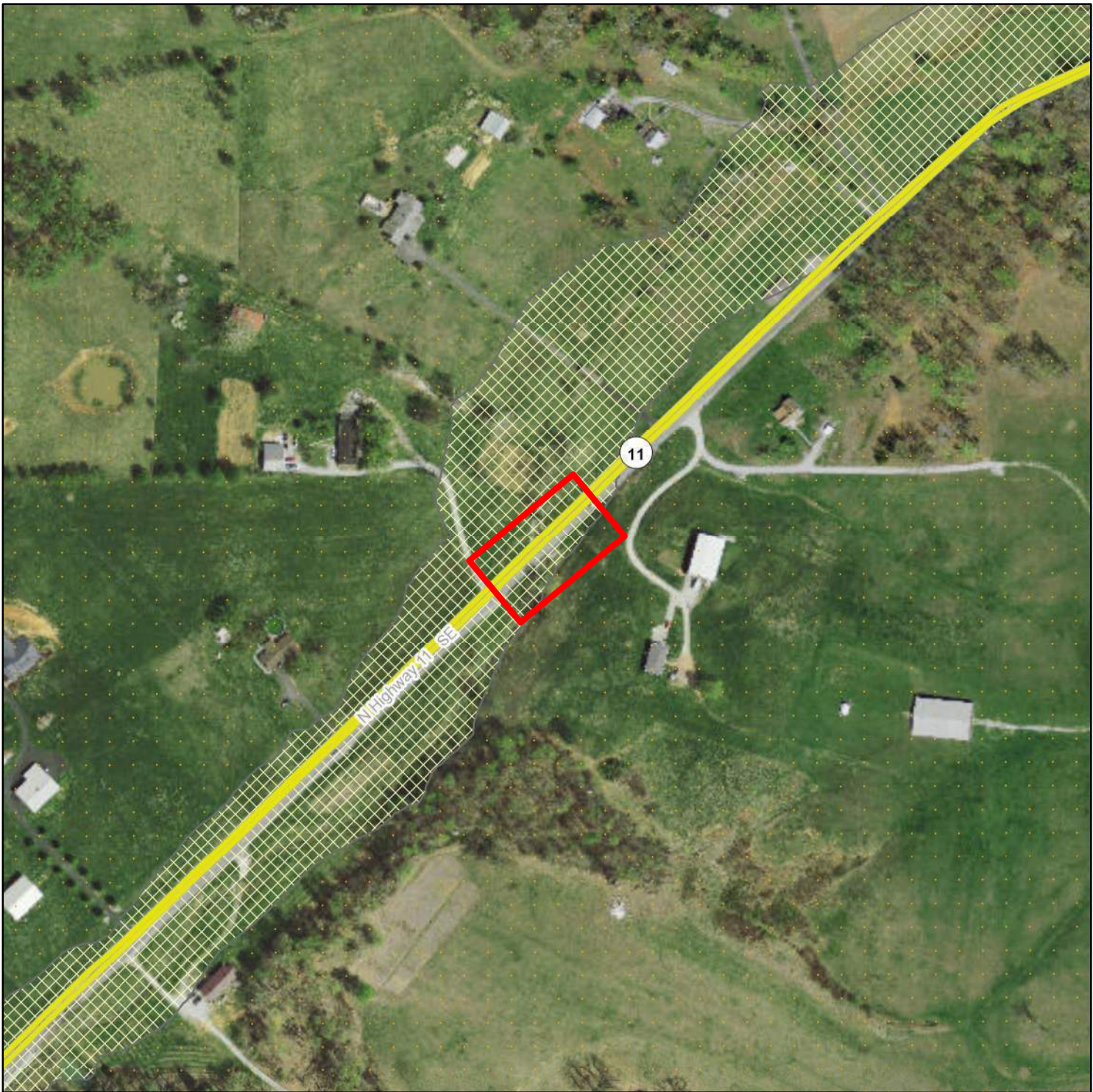


NRCS Soils Map **SR 11 over South Fork Buck Creek** **Bridge Replacement** **Harrison County, Indiana** **Des 1600485**

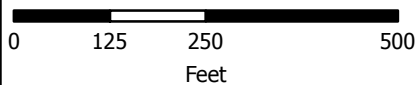


Legend	
	Study Area
	Interstate
	US Roads
	State Roads
	Local Roads
	Railroad
	CcaG-Caneyville-Rock outcrop complex, Not Hydric
	KunAW-Kintner loam, Not Hydric

Service Layer Credits: INDOT
 Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community



FEMA Floodzone Map **SR 11 over South Fork Buck Creek** **Bridge Replacement** **Harrison County, Indiana** **Des 1600485**

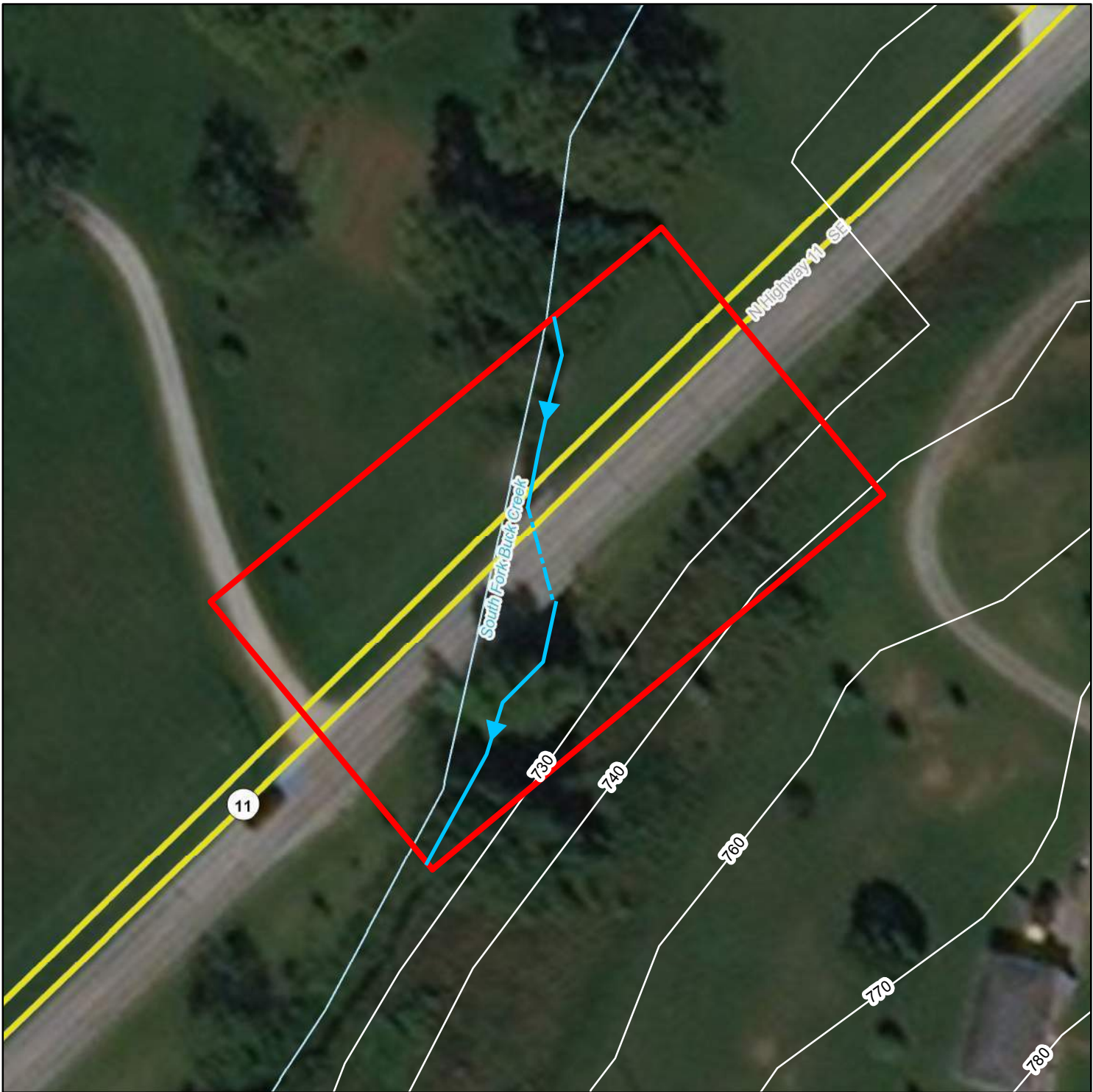


Service Layer Credits: INDOT
 Sources: Esri, HERE, DeLorme, Intermap, increment P Corp.,
 GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL,
 Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong),
 swisstopo, MapmyIndia, © OpenStreetMap contributors, and the
 GIS User Community

Legend

- | | |
|------------|-------------|
| Study Area | Interstate |
| FLOODWAY | US Roads |
| Zone A | State Roads |
| Zone AE | Local Roads |
| Zone X | Railroad |

FEMA FIRM Panels:
 18043C0165E
 18061C0265D



Waters of the US Investigation Map

**SR 11 over South Fork Buck Creek
Bridge Replacement
Harrison County, Indiana
Des 1600485**



0 25 50 100
Feet

Service Layer Credits: INDOT
Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

Legend

- | | | |
|----------------------|--------------------|-------------|
| Study Area | Surface Drainage | Interstate |
| Delineated Stream | Delineated Wetland | US Roads |
| Encapsulated Stream | Wetland Open End | State Roads |
| Photo Location Point | NWI Wetland | Local Roads |
| Upland Data Point | Contours | Railroad |
| Wetland Data Point | | |

PHOTOGRAPHS

Duplicate Photos have been removed and are included in Appendix B.

Preliminary Jurisdictional Determination Form

ATTACHMENT

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PRELIMINARY JURISDICTIONAL DETERMINATION (JD): Report Date: 4/19/2018

Field Investigation Date: 9/19/2017

B. NAME AND ADDRESS OF PERSON REQUESTING PRELIMINARY JD:

Paul Killian
GAI Consultants
201 N. Illinois Street, Suite 1700
Indianapolis, IN 46204

C. DISTRICT OFFICE, FILE NAME, AND NUMBER:

Louisville District

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:

INDOT Des. No. 1600485. SR 11 over SF Buck Creek bridge replacement project is located 0.85 mile south of SR 211 in the Harrison County, Indiana.

(USE THE ATTACHED TABLE TO DOCUMENT MULTIPLE WATERBODIES AT DIFFERENT SITES)

State: Indiana County: Harrison City: Elizabeth

Center coordinates of site (lat/long in degree decimal format):

Lat. 38.126938°N, Long. -85.961078°W

Universal Transverse Mercator:

Name of nearest waterbody: South Fork Buck Creek

Identify (estimate) amount of waters in the review area:

Non-wetland waters: linear feet: 221 (ft) and/or acres.

Cowardin Class: R5UBH (Riverine, Unknown Perennial, Unconsolidated Bottom, Permanently Flooded)

Stream Flow: Perennial

Wetlands: 0.00 acres

Cowardin Class: N/A

Name of any water bodies on the site that have been identified as Section 10 waters:

Tidal: None

Non-Tidal: None

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☐ Office (Desk) Determination. Date:

☐ Field Determination. Date(s):

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.
2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable.

This preliminary JD finds that there "*may be*" waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for preliminary JD (check all that apply - checked items should be included in case file and, where checked and requested, appropriately reference sources below):

☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Delineation report dated April 2018.


☐ Data sheets prepared/submitted by or on behalf of the applicant/consultant.

☐ Office concurs with data sheets/delineation report.

- ☐ Office does not concur with data sheets/delineation report.
- ☐ Data sheets prepared by the Corps: .
- ☐ Corps navigable waters' study: .
- ☒ U.S. Geological Survey Hydrologic Atlas: USGS National Hydrography Dataset; U.S. Geological Survey in cooperation with U. S. Environmental Protection Agency and U.S. Forest Service; <http://viewer.nationalmap.gov/viewer>.
- ☒ USGS NHD data.
- ☐ USGS 8 and 12 digit HUC maps.
- ☒ U.S. Geological Survey map(s). Cite scale & quad name: 24K Lanesville.
- ☒ USDA Natural Resources Conservation Service Soil Survey. Citation: USDA NRCS Soil Survey Geographic (SSURGO) Database for Harrison County, Indiana. Available online at <http://websoilsurvey.nrcs.usda.gov>.
- ☒ National wetlands inventory map(s). Cite name: NWI accessed 2017
- ☐ State/Local wetland inventory map(s): .
- ☒ FEMA/FIRM maps: FEMA accessed 2017.
- ☐ 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- ☒ Photographs: ☒ Aerial (Name & Date): ESRI World Imagery, 2014
or ☒ Other (Name & Date): Site Photos Dated 9/19/2017.
- ☐ Previous determination(s). File no. and date of response letter: .
- ☐ Other information (please specify): .

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

Signature and date of
Regulatory Project Manager
(REQUIRED)

 4/19/18

Signature and date of
person requesting preliminary JD
(REQUIRED, unless obtaining the
signature is impracticable)

Site Number	Latitude	Longitude	Cowardin Class	Estimated Amount of Aquatic Resource in Review Area	Class of Aquatic Resource
South Fork Buck Creek	38.126938	-85.961078	Riverine	221 ft.	Non-section 10, non-wetland

Raquel Walker

From: Sperry, Steve <SSPERRY@indot.IN.gov>
Sent: Tuesday, April 24, 2018 2:53 PM
To: Paul Killian
Cc: Mankin, Travis; Rehder, Crystal
Subject: APPROVED: Waters Report, SR 11 Bride Replacement over SF Buck Cr. 0.85 mi S. of SR 211 Harrison Co 1600485
Attachments: 1600485 Waters Rprt_Final 20180424.pdf

Dear Mr. Killian

Thank you for submitting the waters report for the above referenced project.

Travis,

The approved report is attached and can also be found on ProjectWise through this link [1600485 Waters Rprt_Final 20180424.pdf](#) *It is the responsibility of the Project Manager to forward a copy of this report to the Project Designer.*

The information in this report should be used by the Project Designer to determine if waters of the U.S. will be impacted by the project. Avoidance and minimization of impacts must occur *before* mitigation will be considered. If mitigation is required, the Project Manager or Project Designer must coordinate with the Ecology and Waterway Permitting Office to discuss how adequate compensatory mitigation will be provided.

The Project Manager should notify the Ecology and Waterway Permitting Office if there is any change to the project footprint presented in this report. Such changes may require additional fieldwork and submittal of an updated waters report covering areas not previously investigated. *This report is only valid for a period of five years from the date of earliest fieldwork.* If the report expires prior to waterway permit application submittal, additional fieldwork and a revised waters report will be required.

This waters report will not be sent to the United States Army Corps of Engineers (USACE) or the Indiana Department of Environmental Management (IDEM) until the waterways permit applications are submitted to these agencies.

Thanks
Steve

Stephen C. Sperry
Ecology and Permits Coordinator
Division of Environmental Services
IGCN Room 642
100 N. Senate Ave.
Indianapolis, IN 46204
Office: (317) 232-5206
Email: ssperry@indot.in.gov



Appendix G

Air Quality

Item	Appendix Page
Statewide Transportation Improvement Plan (STIP)	G1

Indiana Department of Transportation (INDOT)
State Preservation and Local Initiated Projects FY 2020 - 2024

SPONSOR	CONTR ACT # / LEAD DES	STIP NAME	ROUTE	WORK TYPE	LOCATION	DISTRICT	MILES	FEDERAL CATEGORY	Estimated Cost left to Complete Project*	PROGRAM	PHASE	FEDERAL	MATCH	2020	2021	2022	2023	2024
Harrison County																		
Harrison County	37259 / 1383370	A 07	IR 1007	New Road Construction	George's Hill Rd to Old Lanesville Rd N - N I-64 Harrison Co	Seymour	1.398	DEM	\$576,698.48	Demonstration Fund Program	CN	\$1,334,749.80	\$0.00	\$1,334,749.80				
Comments:Adding 576698.48 Demo funds for CE - Earmark IN 141																		
Harrison County	38176 / 1500206	Init.	VA VARI	Bridge Inspections	Countywide Bridge Inspection and Inventory Program for Cycle Years 2018-2021	Seymour	0	STPBG		Local Bridge Program	PE	\$63,158.28	\$0.00	\$5,356.58	\$57,801.70			
											Local Funds	PE	\$0.00	\$15,789.56	\$1,339.14	\$14,450.42		
Indiana Department of Transportation	39413 / 1593019	Init.	I 64	HMA Overlay, Preventive Maintenance	From SR 66 to SR 135	Seymour	12.495	NHPP		Road Construction	CN	\$7,110,426.60	\$790,047.40		\$7,900,474.00			
Indiana Department of Transportation	39896 / 1600485	Init.	SR 11	Br Repl, Reinforced Conc. Construction	0.85 mile S SR 211, over S. Fork Buck Creek	Seymour	0	STPBG		Bridge ROW	RW	\$68,000.00	\$17,000.00	\$85,000.00				
											Bridge Construction	CN	\$1,558,980.00	\$389,745.00		\$1,948,725.00		
Corydon	40028 / 1700267	Init.	ST 1011	Bike/Pedestrian Facilities	Capitol Avenue Gateway & Urban Trail- Stellar Community	Seymour	0	STPBG		Local Transportation Alternatives	CN	\$2,500,000.00	\$0.00	\$2,500,000.00				
											Local Funds	CN	\$0.00	\$513,979.00	\$513,979.00			
Indiana Department of Transportation	40065 / 1602170	Init.	SR 111	HMA Overlay, Preventive Maintenance	12.56 miles S of SR 211 to SR 211	Seymour	12.56	STPBG		Road Construction	CN	\$2,143,678.40	\$535,919.60	\$2,679,598.00				
Indiana Department of Transportation	40065 / 1602170	A 11	SR 111	HMA Overlay, Preventive Maintenance	12.56 miles S of SR 211 to SR 211	Seymour	12.56	STBG	\$4,351,623.00	Road Construction	CN	\$1,337,620.00	\$334,405.00	\$1,672,025.00				
Comments:Increase of CN in FY 2020 of \$1,672,025 for total CN of \$4,351,623. No MPO.																		
Indiana Department of Transportation	40416 / 1701517	Init.	SR 335	Bridge Deck Replacement	02.15 N of SR 135 at Crandall Branch Creek	Seymour	0	STPBG		Bridge ROW	RW	\$16,000.00	\$4,000.00		\$20,000.00			
											Bridge Construction	CN	\$512,626.40	\$128,156.60		\$640,783.00		
Indiana Department of Transportation	40417 / 1700057	Init.	SR 62	Small Structure Replacement	At 6.38 miles E of SR 337	Seymour	0	STPBG		Bridge ROW	RW	\$8,000.00	\$2,000.00		\$10,000.00			
											Bridge Construction	CN	\$308,540.00	\$77,135.00		\$385,675.00		
Indiana Department of Transportation	40417 / 1802986	A 04	SR 62	Small Structure Replacement	5.73 miles E of SR 337	Seymour	0	STBG	\$1,282,574.00	Bridge ROW	RW	\$40,000.00	\$10,000.00				\$50,000.00	
											Bridge Consulting	PE	\$160,000.00	\$40,000.00	\$200,000.00			
											Bridge Construction	CN	\$586,059.20	\$146,514.80				\$732,574.00
Comments:Amend PE in FY 2020, RW in 2023 and CN in FY 2024 to current STIP. No MPO.																		

*Estimated Costs left to Complete Project column is for costs that may extend beyond the four years of a STIP. This column is not fiscally constrained and is for information purposes.

Appendix H

Environmental Justice

Item	Appendix Page
EJ Analysis	H1 to H4

Environmental Justice (EJ) Analysis

Bridge Replacement, SR-11 over South Fork Buck Creek
Harrison County, Indiana
Des. No. 1600485

	Community of Concern (COC)	Affected Community (AC 1)
	Harrison County, Indiana	Census Tract 606
Income		
Total population for the purpose of surveying poverty income:	38,900	6,692
Population with income in the past 12 months below poverty level:	5,005	572
Percent Low Income	12.87%	8.55%
<i>125% of COC</i>	<i>16.08%</i>	
Potential Low-income EJ Concern?		No
Race		
Total Population for the purpose of surveying race:	39,450	6,798
Total population non-hispanic/latino; white alone:	37,739	6,552
Number of Minorities	1,711	246
Percent of Minorities	4.34%	3.62%
<i>125% of COC</i>	<i>5.42%</i>	
Potential Minority EJ Concern?		No

B17001: POVERTY STATUS IN THE PAST 12 MONTHS BY SEX BY AGE - Universe: Population for whom poverty status is determined
2013-2017 American Community Survey 5-Year Estimates

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Technical Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities, and towns and estimates of housing units for states and counties.

	Harrison County, Indiana		Census Tract 606, Harrison	
	Estimate	Margin of	Estimate	Margin of
Total:	38,900	+/-191	6,692	+/-522
Income in the past 12 months below poverty	5,005	+/-790	572	+/-234
Male:	2,265	+/-468	307	+/-150
Under 5 years	290	+/-149	27	+/-36
5 years	32	+/-43	2	+/-3
6 to 11 years	261	+/-109	45	+/-36
12 to 14 years	75	+/-50	17	+/-27
15 years	29	+/-46	0	+/-16
16 and 17 years	50	+/-68	0	+/-16
18 to 24 years	195	+/-111	9	+/-16
25 to 34 years	342	+/-201	15	+/-24
35 to 44 years	260	+/-124	46	+/-44
45 to 54 years	308	+/-138	69	+/-63
55 to 64 years	280	+/-119	64	+/-73
65 to 74 years	106	+/-68	0	+/-16
75 years and over	37	+/-34	13	+/-20
Female:	2,740	+/-475	265	+/-119
Under 5 years	87	+/-70	0	+/-16
5 years	26	+/-26	0	+/-16
6 to 11 years	209	+/-114	15	+/-22
12 to 14 years	71	+/-52	0	+/-16
15 years	0	+/-24	0	+/-16
16 and 17 years	97	+/-80	14	+/-21
18 to 24 years	297	+/-135	22	+/-37
25 to 34 years	465	+/-196	24	+/-30
35 to 44 years	330	+/-134	31	+/-30
45 to 54 years	485	+/-179	72	+/-46
55 to 64 years	402	+/-148	40	+/-56
65 to 74 years	129	+/-80	47	+/-58
75 years and over	142	+/-78	0	+/-16

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see Accuracy of the Data). The effect of nonsampling error is not represented in these tables.

While the 2013-2017 American Community Survey (ACS) data generally reflect the February 2013 Office of Management and Budget (OMB) definitions of metropolitan and micropolitan statistical areas; in certain instances the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB definitions due to differences in the effective dates of the geographic entities.

Estimates of urban and rural populations, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2010 data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.

Source: U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates

Explanation of Symbols:
1. An '***' entry in the margin of error column indicates that either no sample observations or too few sample observations were available to compute a standard error and thus the margin of error. A statistical test is not appropriate.
2. An 'N' entry in the estimate column indicates that either no sample observations or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest interval or upper interval of an open-ended distribution.
3. An '-' following a median estimate means the median falls in the lowest interval of an open-ended distribution.
4. An '+' following a median estimate means the median falls in the upper interval of an open-ended distribution.
5. An '***' entry in the margin of error column indicates that the estimate falls in the lowest interval or upper interval of an open-ended distribution. A statistical test is not appropriate.
6. An '*****' entry in the margin of error column indicates that the estimate is controlled. A statistical test for sampling variability is not appropriate.
7. An 'N' entry in the estimate and margin of error columns indicates that data for this geographic area cannot be displayed because the number of sample cases is too small.
8. An '(X)' means that the estimate is not applicable or not available.

**B03002: HISPANIC OR LATINO ORIGIN BY RACE - Universe: Total population
2013-2017 American Community Survey 5-Year Estimates**

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Technical Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities, and towns and estimates of housing units for states and counties.

	Harrison County, Indiana		Census Tract 606, Harrison	
	Estimate	Margin of	Estimate	Margin of
Total:	39,450	*****	6,798	+/-531
Not Hispanic or Latino:	38,773	*****	6,736	+/-530
White alone	37,739	+/-129	6,552	+/-546
Black or African American alone	87	+/-66	0	+/-16
American Indian and Alaska Native alone	220	+/-174	82	+/-117
Asian alone	143	+/-62	0	+/-16
Native Hawaiian and Other Pacific Islander	0	+/-24	0	+/-16
Some other race alone	92	+/-121	73	+/-115
Two or more races:	492	+/-174	29	+/-37
Two races including Some other race	29	+/-39	0	+/-16
Two races excluding Some other race,	463	+/-163	29	+/-37
Hispanic or Latino:	677	*****	62	+/-41
White alone	429	+/-159	53	+/-39
Black or African American alone	7	+/-11	0	+/-16
American Indian and Alaska Native alone	0	+/-24	0	+/-16
Asian alone	0	+/-24	0	+/-16
Native Hawaiian and Other Pacific Islander	0	+/-24	0	+/-16
Some other race alone	219	+/-163	9	+/-15
Two or more races:	22	+/-32	0	+/-16
Two races including Some other race	0	+/-24	0	+/-16
Two races excluding Some other race,	22	+/-32	0	+/-16

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see Accuracy of the Data). The effect of nonsampling error is not represented in these tables.

While the 2013-2017 American Community Survey (ACS) data generally reflect the February 2013 Office of Management and Budget (OMB) definitions of metropolitan and micropolitan statistical areas; in certain instances the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB definitions due to differences in the effective dates of the geographic entities.

Estimates of urban and rural populations, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2010 data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.

Source: U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates

Explanation of Symbols:

1. An '***' entry in the margin of error column indicates that either no sample observations or too few sample observations were available to compute a standard error and thus the margin of error. A statistical test is not appropriate.
2. An '-' entry in the estimate column indicates that either no sample observations or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest interval or upper interval of an open-ended distribution.
3. An '-' following a median estimate means the median falls in the lowest interval of an open-ended distribution.
4. An '+' following a median estimate means the median falls in the upper interval of an open-ended distribution.
5. An '***' entry in the margin of error column indicates that the median falls in the lowest interval or upper interval of an open-ended distribution. A statistical test is not appropriate.
6. An '*****' entry in the margin of error column indicates that the estimate is controlled. A statistical test for sampling variability is not appropriate.
7. An 'N' entry in the estimate and margin of error columns indicates that data for this geographic area cannot be displayed because the number of sample cases is too small.
8. An '(X)' means that the estimate is not applicable or not available.



Des. 1600485

Legend:

Your Selections

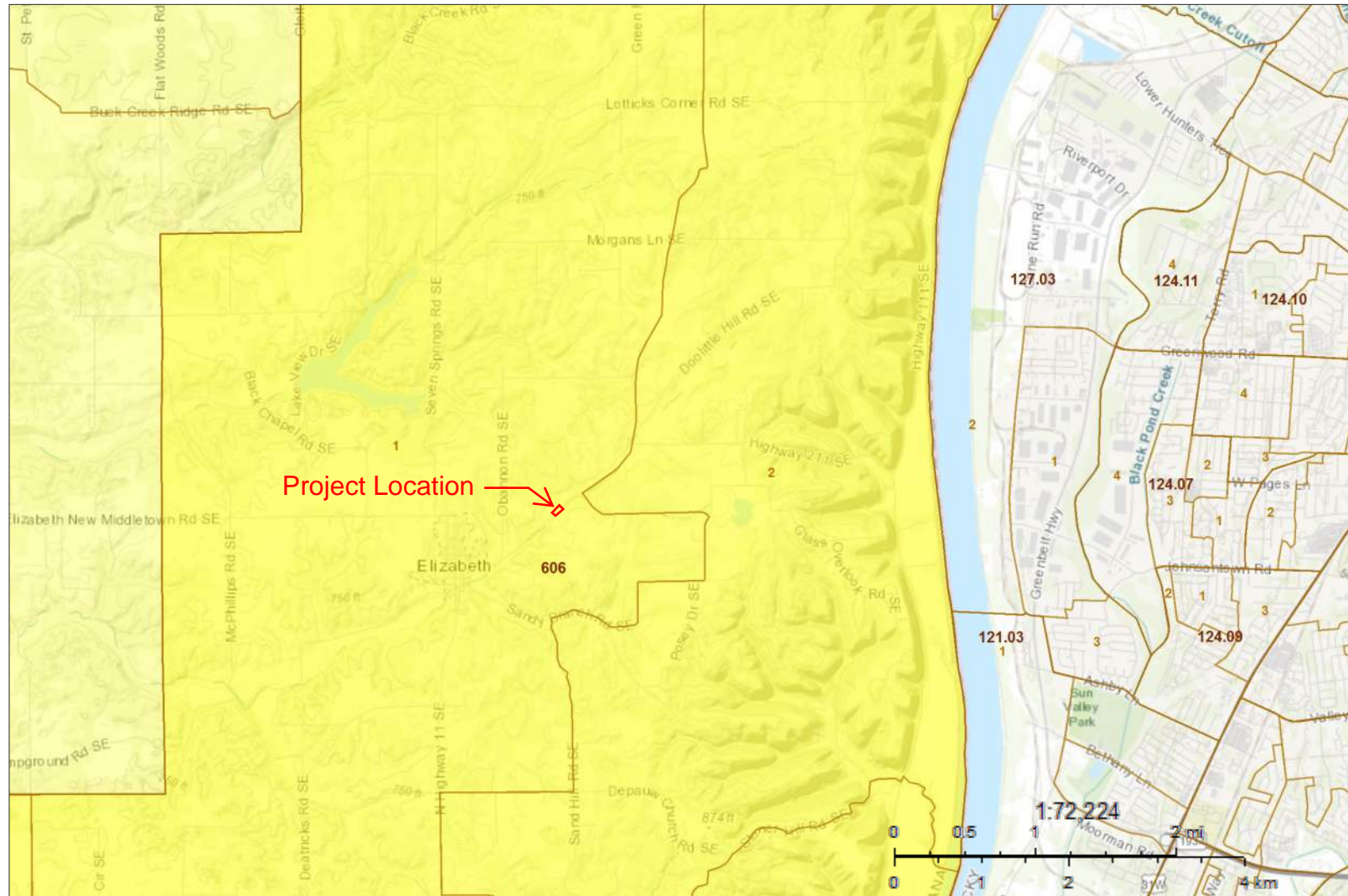
- 2017 boundaries were used to map 'Your Selections'

Selection Results

No Legend

2017 Boundaries

- Census Tract
- Block Group



Appendix I

Additional Studies

Item	Appendix Page
DOI Land & Water Conservation Funds Grants	I1
IDNR-DOR LWCF Property List	I2

Land and Water Conservation Fund Grants: Indiana

The Park Service is finding out about more closures and conversions of federally protected parks than ever before. But no one knows just how many, so InvestigateWest compiled this database, which lists every LWCF grant between 1965 and 2011, as a starting point. Click a column header to re-sort the table. Click-shift to add a secondary sort.

[RETURN TO THE PROJECT PAGE](#)

FILTER THE LIST: ×

Grant ID & Element	Grant Name	Sponsor	County	State	Grant Amount	Year Approved	Year Completed	Type
18 - XXX	WALTER Q. GRESHAM MEMORIAL PARK	HARRISON COUNTY PARK BOARD	HARRISON	IN	\$17,271.23	1967	1968	Combination
60 - XXX	HAYS-WOOD NATURE RESERVE PARK	HARRISON COUNTY PARK BOARD	HARRISON	IN	\$42,387.02	1970	1973	Combination
61 - XXX	BUFFALO TRACE PARK	PALMYRA PARK BOARD	HARRISON	IN	\$7,125.00	1971	1973	Acquisition
98 - XXX	BLUE RIVER COMPLEX ACQ	DEPT. OF NATURAL RESOURCES	HARRISON	IN	\$449,560.60	1971	1978	Acquisition
107 - XXX	BUFFALO TRACE PARK DEVELOPMENT	HARRISON COUNTY PARK BOARD	HARRISON	IN	\$97,947.39	1972	1974	Development
191 - XXX	HARRISON COUNTY SWIMMING POOL	HARRISON COUNTY PARK BOARD	HARRISON	IN	\$63,000.00	1975	1977	Development
219 - XXX	HARRISON-CRAWFORD ST FOR GROUP CAMP	DEPT. OF NATURAL RESOURCES	HARRISON	IN	\$41,753.15	1975	1979	Development
229 - XXX	HARRISON-CRAWFORD ST FOR TRAILS	DEPT. OF NATURAL RESOURCES	HARRISON	IN	\$145,797.40	1975	1977	Development
193 - XXX	HARRISON PARK TENNIS COURT LIGHTING	HAMMOND PARK BOARD	LAKE	IN	\$8,830.75	1975	1977	Development
260 - XXX	WYANDOTTE WOODS ST REC AREA	DEPT. OF NATURAL RESOURCES	HARRISON	IN	\$2,386,856.00	1976	1981	Development
317 - XXX	D/SOUTH HARRISON PARK	HARRISON COUNTY PARK BOARD	HARRISON	IN	\$407,458.00	1978	1983	Combination
362 - XXX	HARRISON-CRAWFORD STATE FOREST LAND	DEPT. OF NATURAL RESOURCES	MULTI-COUNTY	IN	\$26,750.00	1979	1984	Acquisition
369 - H	HARRISON PARK RENOVATION	HAMMOND PARK BOARD	LAKE	IN	\$107,415.11	1980	1984	Development
398 - XXX	D/HARRISON RIDGE PARK	COLUMBUS PARK BOARD	BARTHOLOMEW	IN	\$87,490.47	1981	1985	Combination
412 - XXX	HARRISON RIDGE PARK - PHASE II	COLUMBUS PARK BOARD	BARTHOLOMEW	IN	\$9,174.47	1983	1984	Development
559 - XXX	O'BANNON WOODS STATE PARK AQUATIC CENTER	DEPT. OF NATURAL RESOURCES	HARRISON	IN	\$1,083,852.00	2005	2009	Redevelopment

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Land and Water Conservation Fund (LWCF) County Property List for Indiana (Last Updated December 2019)

ProjectNumber	SubProjectCode	County	Property
1800018	1800018	Harrison	Walter Q. Gresham Memorial Park
1800060	1800060	Harrison	Hayswood Nature Preserve & Indian Creek Woods
1800061	1800061	Harrison	Buffalo Trace Park
1800098	1800098	Harrison	Harrison-Crawford State Forest
1800107	1800107	Harrison	Buffalo Trace Park
1800191	1800191	Harrison	Harrison Poolside Park & Rhoads Memorial Pool
1800219	1800219	Harrison	Harrison-Crawford State Forest
1800229	1800229	Harrison	Harrison-Crawford State Forest
1800260	1800260	Harrison	Wyandotte Woods State Recreation Area (Harrison-Cr
1800317	1800317	Harrison	South Harrison Park and Pool
1800362	1800362	Harrison	Harrison-Crawford State Forest
1800363	1800363L	Harrison	Harrison-Crawford State Forest
1800405	1800405M	Harrison	Harrison-Crawford State Forest
1800413	1800413D	Harrison	Adventure Trail Harrison-Crawford State Forest
1800559	1800559	Harrison	O'Bannon Woods SP

Please note, some of the property names are cut off on the ends due to character limits

Also, park names may have changed and is not reflected on the list.

*Various - this may include multiple sites in multiple counties and should always be included in your search